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The Samuel Hyde Memorial Lectures

ON

THE PLACE OF CLIMATOLOGY IN MEDICINE.

Delivered before the Section of Balneology and Climatology of the Royal Society of Medicine on May 20th and 21st, 1913,

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LECTURE I.

Delivered on May 20th.

SIR HERMANN WEBER AND GENTLEMEN,—I have first—and the duty is a pleasant one—to offer to the council and members of the section my best thanks for the honour they have done me in asking me to deliver these, the second, Hyde Memorial Lectures, and for the added honour, Sir, that you preside. When their kind invitation came to me I felt a good deal of misgiving as to whether I ought to accept it; it seemed no light matter to me, whose province is general medicine, to address men in their own special department of knowledge, who are so well fitted to instruct myself. But, as I thought over the possible reasons why I had been asked, one seemed to suggest itself which encouraged me to make the attempt. The opening lectures of a long series, such as one must suppose that these will be, are not unlike the introduction to a bulky volume, and may be expected to survey the whole subject from a general point of view. Such an introduction I thought a general physician might write; such, at all events, I now venture to place before you. My predecessor, Dr. Fortescue Fox, in his interesting lectures last year, dealt in the broad fashion I refer to with the subject of hydrology, the *περὶ ὑδάτων* of Hippocrates. To me this year have fallen the *περὶ ἀέρων καὶ τόπων*. I propose to consider their place in contemporary medical study, to indicate their immense real importance, and, whilst noting their general present-day neglect, to suggest certain remedies which may tend to restore them to the place that is rightfully theirs. How far my performance in this programme is going to fall short of my opportunity I am only too painfully aware. But, as Browning puts it, "let your better wit mend all."

My second duty—and privilege—is to call to your recollection him in whose honour these lectures have been named. Dr. Samuel Hyde was born at Stalybridge in Cheshire in 1849, and received his medical education at King's College, London. He settled at Buxton in 1877 as medical officer of the "Peak Hydropathic and Thermal Establishment," and afterwards in private practice, acquiring the reputation of a skilful, observant physician, thoughtful and thorough, deeply imbued with the faith of fruitful experience in the efficacy of waters and climate in the treatment of disease. Literature on the subject was then limited, and his editings and writings added valuably to what was available. In 1889 he inaugurated a Journal of British and Foreign Health Resorts, and in 1895 he and Dr. Septimus Sunderland founded the British Balneological and Climatological Society, the parent of this section, thus providing for the first time a common meeting-ground for the medical observers at the various British health resorts, a notable service to the medicine of this country, and one we do well to specially commemorate. Hyde also became the editor of the Quarterly Journal of the Society. Dr. Fox, who knew him well, has described him as an indefatigable worker, patient and persistent, with the imagination to conceive and foresee, the constructive ability, courage, and perseverance to achieve, a personality of rare effectiveness and charm. When death claimed him at the early age of 50 his work was already complete—a British school of balneology and climatology had been created.

THE IMPORTANCE OF MEDICAL CLIMATOLOGY.

To realise the importance of medical climatology it is only necessary to define it. Yet this is not so simple as might at first sight appear; definitions are generally difficult, and this one seems to have been found exceptionally so. Modern authorities have commonly dealt with climates simply in terms of average local weather. But in its medical aspects, at all events, climatology covers more than can be so expressed. When we talk of a climate being good or bad in a medical sense, it is not only weather which we have in mind. Doubtless something may be said for the view that the effects of climate are ultimately results of meteorological conditions, at least where neither the inhabitants nor their habitations go barefoot on the soil, and if we exclude hydrology. But many of these meteorological conditions cannot at present be determined; of the existence of some of them we are probably unaware; so that we are obliged, for practical purposes, to include in our definition, as in our investigations, topographical factors whose meteorological consequences still remain to be unravelled. In making this compromise it is curious to observe that we are but following the lead of the "Father of Medicine," who summed up his subjects as "airs, waters, and places."

I would therefore define "climate" and "climatology" in their medical aspects thus: "The climate of a place, in a medical sense, is the sum of the influences upon human health and sickness of its geographical, and especially of its meteorological conditions"; and "Medical climatology is the science of climates medically considered and of their variations in space and time." So defined, it is clear that climatology constitutes a great part of the environment of medicine, and that to neglect it is to ignore much of the natural history of disease.

Medical climatology may be divided into "descriptive" and "theoretical"; "descriptive," embracing "medical geography," which treats of the distribution of disease over the earth, and "medical history" concerned with records of epidemics and those changes in prevalence or type which diseases undergo; "theoretical," including what may be termed "geographical" and "historical pathology," sciences which should set forth the laws which govern these distributions and periodicities.

THE PLACE OF CLIMATOLOGY IN THE PAST.

No survey of my subject could be considered complete which did not take cognizance of the past. Nor will a brief retrospect be devoid of practical advantage.

In the dawn of European thought, during the epoch in which the Greek genius attained its zenith, that is to say, in the sixth and fifth centuries before Christ, men apparently looked on life more directly and comprehensively than we do now; and sometimes reached, as it were intuitively, simpler and saner views. Thus it has been held by no mean modern thinkers that in the great writings of 24 centuries ago guidance is to be gained in those confused problems which our murkier mental atmosphere presents to us. So it seems to be in medicine. For the work of Hippocrates on Climatology, brief as it is, translatable in less than 9000 words, takes a view of the subject whose width is only beginning to be understood. In that work seasons and soils, winds and waters, aspects, shelters and exposures, altitudes, temperatures, vegetation, the habits, food and drink of the inhabitants, are all taken into account, and not merely as affecting disease but normal development, not only the physical characters of races, but their moral characteristics—even the excellence of their art and their success in war. "Whoever," says the Master, "wishes to investigate medicine properly," must attend to these things.

It would be rash to conclude that so wide a presentment of the subject was entirely original in the time of the writer, and, in fact, we have indications that his predecessors and contemporaries were accustomed to lay stress on such considerations. Whether this arose from the peculiarities of their training in natural health resorts, or from the marked differences which obviously existed between climates familiar to them, we do not know. But the story that Empedocles of Agrigentum improved the climate of his native town in Sicily by blocking up an opening betwixt two hills shows that the ancients realised how much depended on knowledge of this sort.

This primitive width of outlook was not, however, maintained. So far as I can discover, subsequent writers gave the subject narrower treatment: even Aretaeus, regarded as the second most distinguished of the physicians of antiquity, dismissed climatology almost in a page. Perhaps the great anatomical researches of Alexandria had turned men's minds

into different channels. Celsus and Galen apparently had little of importance to say on the matter. The great Arabic commentators, whether at Baghdad or Cordova, appear almost to have passed it by. Even the Renaissance gave it slight attention. Sydenham in England was exceptional in the stress he laid on the seasonal varieties of disease, following in this his favourite model, Hippocrates. But even Sydenham, so far as I can see, made no valuable advance; and, until the great medical æra of the nineteenth century, the place of medical climatology was far more limited than it had been in primitive times. Then, however, a wider activity set in. The extension of facilities for travel was succeeded by the growth of medical geography; medical history followed in natural sequence; and a study of their theory began. Further than this, historians like Buckle and Draper, philosophers like Herbert Spencer, took up the thread of speculation on the influence of climates upon races, where Hippocrates had let it fall; so that once more, after so many centuries of comparative neglect, the whole fabric of ancient thought upon the subject rose into view.

THE PLACE OF CLIMATOLOGY IN THE PRESENT.

And this brings us to a survey of the extent of our present knowledge.

At the outset one must distinguish the factors which enter into climatology, so far as they have hitherto revealed themselves. Sixteen may perhaps be enumerated, half of them *meteorological*, half *topographical*. These are set forth in Table I. All of them have been considered in one way or another in relation to disease, and already our gains are great, though modest indeed compared to what they may be. But for satisfactory knowledge of their action we require not only to be acquainted with their relations to human disease, but also to know their influence on human beings in health, as well as on the parasites which produce human disease, and on such non-human hosts as harbour them.

TABLE I.

Climatological Factors.

METEOROLOGICAL.	TOPOGRAPHICAL.
Temperature.	Latitude.
Wind.	Geographical position,—by which is meant relation to land and sea, lakes, mountains, &c.
Rainfall.	Altitude.
Sunlight.	Soil.
Electricity.	Vegetation.
Atmospheric pressure.	Water-supply.
Atmospheric humidity.	Wind shelter and exposure.
Atmospheric purity.	Aspect.

Other Factors sometimes requiring Elimination.

Race.	Sanitation.
Closeness of intermarriage.	Preventive measures against disease.
Sex.	Prevalence of other diseases connected in any way with the disease in question.
Age.	Progressive change in prevalence with the lapse of time.
Occupation.	
Density of population.	
Poverty.	

Needless to say it is not my purpose to weary you with a systematic outline of knowledge so familiar to you. I shall only recall what is necessary to illustrate my point, the immense importance of the subject; and if I dwell on this fact or on that at greater length, it is only because it bears on an illustration which I shall presently give of what I conceive to be a fundamental principle.

Influences on Healthy Human Beings.

Considering first their influences upon healthy human beings, the most powerful of all climatic factors seems to be *temperature*. Taken in conjunction with atmospheric humidity, it was suggested by the late Dr. W. R. Huggard, of Davos, as the most practical means of classifying climates, and although it may be questioned whether the time is yet ripe for any sort of classification to be satisfactorily laid down, whatever grouping may be ultimately adopted, temperature will almost certainly have to be one main means of climatic division. Ranke has made the pregnant observation that there seems to be an optimum temperature for human beings, which, he says, necessitates the least amount of metabolism compatible with healthy active life. He has placed this optimum between 59° and 68° F., within, in fact, about the limits of temperature which experience has shown us to be best for a pneumonia patient. In hot climates, where least metabolism is required, less food is consumed and there is a disinclination to exertion. The abdominal organs are hyperæmic, the skin acts more and the kidneys less than in temperate regions, and danger attends conditions which involve considerable heat production, such as fevers, physical exertion, and excess in eating. In cold climates, on the other hand, more food is requisite to obtain a healthy activity, but active exercise is commonly taken, and the skin acts less, the kidneys more.

Atmospheric humidity claims special attention from its important relations to temperature. The humidity reduces the tropical heat, but increases its oppressiveness, and people in hot damp climates become lethargic and relaxed. The effects of cold are also greatly modified by humidity; whereas in dry cold the removal of heat from the body is determined by the bodily needs, in damp cold there is a leakage of warmth which is difficult to wholly prevent. Clothes do not entirely control it, and wind, if it exists, considerably increases it. Humidity also acts importantly in lessening the intensity of light.

Atmospheric pressure has received a great deal of attention, chiefly because so many of those who have interested themselves in the effects of altitude have assumed that its influence is chiefly due to this factor. If, however, we set aside special effects, such as mountain sickness (the outcome of a diminished intake of oxygen) and an enlargement of the thorax of a compensatory sort, the most interesting indisputable result of diminished atmospheric pressure seems to be compensatory increase of the colouring matter of both plants and animals—in plants of the chlorophyll, in animals of the hæmoglobin and red corpuscles.

Winds have received strangely little attention. In damp cold the leakage of heat from the body becomes much greater in wind. Then certain winds are remarkably enervating, like the Föhn. East wind in Europe is detrimental to many persons, although we have no satisfactory knowledge of why this is so. East winds in these countries seem to have less ozone in them than south-westers, but what effect this difference produces we do not know.

Light increases colour and well-being, yet its precise action on human beings has received, I think, very little attention. *Of electricity* in its natural conditions we know practically nothing as a climatic factor. Yet recent experiments, in which it has been artificially used to stimulate plant and animal growth, suggest that electrical conditions may have powerful effects on climate. Of the influences on healthy men of *rainfall*, *soil*, *vegetation*, *wind shelter*, and *wind exposure*, we know practically nothing.

Thus so far as what may be called "physiological climatology" is concerned, we know enough to indicate the importance of knowing more; yet we are still only on the threshold of the subject.

Influence on Parasites and their Non-human Hosts.

We have learnt for certain that the effect of climate on some of the parasites of man and on their non-human hosts is profound. The study of tropical diseases has made this plain. Certain disorders are confined to certain zones of *temperature*. Thus, whatever may be found to be the organism of yellow fever, we know that it does not flourish in temperate climates. The mosquito that carries it and the mosquito host of malaria become rare also at certain altitudes where the heat is less. Other diseases are modified. Thus, phthisis in the tropics, whilst usually uncommon outside the towns, runs a more rapid course than in cooler latitudes. The gravity of type is probably due in part to the temperature, the rarity is perhaps a consequence of the intensity of light. We know there are optimum temperatures for organisms, as Ranke says there are for man. *Light*, again, has a profound destructive influence upon micro-organisms, especially direct sunlight. Apparently it is the blue, violet, and ultra-violet rays to which it owes this most important power. The comparative rarity of phthisis in the tropics just referred to, and in some high altitudes as well, may owe not a little to the disinfectant power of light.

Rain is popularly supposed to wash the atmosphere, and, whilst it is raining, it doubtless does so. But it is sometimes forgotten that heavy rain after drought causes unusually active development of organisms in the soil, and that these, when the air dries again, enter it as dust. Long-lasting drought decreases the number and the vitality of organisms

in the soil. Of the *action of wind, air pressure, natural electricity*, and *soil* on pathogenic microbes we are, I believe, without information. Here, again, therefore, we have much to learn and comparatively little has as yet been established.

Influence on Human Disease.

Dealing next with the influence of the factors of climate on human diseases, we enter on a field where remarkable progress has been made. Medical geography has become an imposing branch of knowledge. A great empiric acquaintance with the effect of places on disease is steadily growing up. Of this I need say no more. Similarly, medical history is becoming constantly more considerable and precise. But when we come to the theoretical side of medical climatology we find ourselves considerably worse off. It is not too much to say that the most striking characteristic of our knowledge in this department is its uncertainty.

Phthisis is the complaint upon which by far the most has been written in reference to its relations with climate, both in respect of frequency and course. *Altitude* is an ancient subject of discussion. In Peru its influence has been extolled for time out of mind. In my second lecture I shall deal very fully with the claims of the "altitude theory of immunity," and propose to show, in spite of the labour expended on the subject, that nothing has hitherto been proved. *Latitude*, strange to say, has attracted less attention, though its effects are more certainly important. *Soil* has been repeatedly investigated and, to those who have not read the original monographs of Bowditch and Buchanan, the relation of phthisis to dampness of soil is no longer open to doubt. To those, however, who have carefully sifted the evidence the question is still undecided. *Wind shelter and exposure* have engaged my own attention closely for the past 14 years, but although the results of my work have left no doubt on my own mind, I cannot flatter myself that my convictions are shared by everyone. *Atmospheric pressure* is, with some authors, a synonym for altitude. Yet there are strong reasons for questioning its effect. *Temperature* is probably a notable factor in determining the influence of both altitude and latitude, and its variations may have something to do with the effects of wind. Yet nothing is definitely ascertained. About *rainfall, atmospheric humidity, atmospheric purity, sunlight, local aspect, geographical position, vegetation, water-supply, and electricity* in relation to phthisis we know nothing positively, although with regard to several of these a good deal is sometimes written which can only be regarded as surmise. In fact, considering the amount of labour hitherto spent on the theoretical climatology of phthisis, the real outcome has been extremely small. A terrible vagueness lies like a blight over the field of labour.

Other tuberculous diseases.—Other tuberculous diseases have scarcely been investigated climatologically, except where they have been included in the same figures with phthisis. It is interesting and very curious to observe that the *actual sea-front*, so hurtful in cases of pulmonary tuberculosis (as Walshe, I think, first pointed out, and as Ransome has urged), is highly beneficial in certain localities to so-called surgical tuberculosis. Of this no explanation exists.

Pneumonia.—The frequency and severity of pneumonia at high altitudes have been as much insisted on as the rarity of phthisis. It seems, in fact, to be well established that in many mountainous regions pneumonia becomes commoner and more deadly as altitude increases. Whether this depends on increased exposure to certain winds is a question awaiting investigation. Some very small figures, which I am going to submit to you, suggest that this may be the case. The idea that exposure to cold dry winds is an important cause of the disease is not new, and interesting instances of coincident prevalence of such winds and pneumonia have been given. The curious converse distribution of phthisis and pneumonia to which I have drawn attention might be due to differing wind exposures. For if phthisis mortality is increased in a given area by south-west winds, and pneumonia mortality by north-east winds, such a general distribution might be expected. In the United States, according to the census of 1880, the generally converse distribution was most curiously marked. The following example of converse distribution may not be uninteresting to you. I have dealt elsewhere rather elaborately with the rural district of Okehampton, in Devonshire, where I mapped out the distribution of phthisis in the parishes, and the exposure and shelter of the parishes to different winds. The maps of phthisis distribution for the decade of 1890–1899 were found to present a most striking correspondence with the maps of exposure and shelter in respect of west and south-west winds. I here present to you two tables showing the relation of pneumonia mortality to the exposure to north-east wind. The first, Table II., deals with all deaths between the ages of 5 and 70 during the years 1890 to 1899, the same as were investigated in respect of phthisis. Cases under 5 and over 70 were excluded as specially likely to introduce error from inclusion of broncho-pneumonia and hypostatic pneumonia. The assessment of shelter and exposure was that originally made for the phthisis investigation, and confirmed by my friend, Dr. E. H. Young, medical officer of health of Okehampton, who also kindly supplied me with the present returns. It is seen that whereas, in parishes sheltered from north-east wind only 0·35 per 1000 died from lobar pneumonia, in the parishes exposed to the

TABLE II.—*North-East Wind and Lobar Pneumonia: All Deaths at Ages 5 to 70, Okehampton Rural District, 1890–1899.*

I.—*Sheltered Parishes (total population 5061).*

Name of parish.	Population 1891.	Deaths.	Name of parish.	Population 1891.	Deaths.
Iddesleigh	377	3	Bridestowe	586	3
Hatherleigh	1437	6	Bratton Clovelly	487	2
Monkokehampton	191	—	Germansweek	211	—
North Tawton	1737	4	Honeychurch	35	—

Total deaths, 18 = annual death-rate (average) 0·35 per 1000.

II.—*Exposed Parishes (total population 5796).*

South Tawton	1264	11	Ashbury	69	—
Spreyton	388	4	Inwardleigh	519	
Chagford	1460	7	Beaworthy	268	2
Gidleigh	129	—	North Lew	714	1
Belstone	181	2	Highampton	284	2
Okehampton (rural)	520	1			

Total deaths, 32 = death-rate (average) 0·55 per 1000.

III.—*Imperfectly Sheltered Parishes (total population, 3528).*

Meeth	203	1	Drewsteignton	751	4
Broadwood Kelly	261	—	Throwleigh	281	1
Jacobstowe	222	—	Sourton	448	1
Exbourne	355	2	Bondleigh	141	—
Sampford Courtenay	866	9			

Total deaths, 18 = death-rate (average) 0·51 per 1000.

TABLE III.—*North-East Wind and Lobar Pneumonia: Female Deaths at Ages 5 to 70, Okehampton Rural District, 1890–1899.*

I.—*Sheltered Parishes (2614 Females).*

Name of parish.	Female population 1891.	Female deaths 1890–1899.	Name of parish.	Female population 1891.	Female deaths 1890–1899.
Iddesleigh	197	1	Bridestowe	309	2
Hatherleigh	724	4	Bratton Clovelly	255	—
Monkokehampton	83	—	Germansweek	102	—
North Tawton	927	—	Honeychurch	17	—

Total deaths, 7 = female death-rate (average) 0·26 per 1000 per annum.

II.—*Exposed Parishes (2916 Females).*

South Tawton	633	7	Ashbury	37	—
Spreyton	193	3	Inwardleigh	258	—
Chagford	728	2	Beaworthy	122	2
Gidleigh	57	—	North Lew	364	1
Belstone	89	2	Highampton	135	1
Okehampton	300	—			

Total deaths, 18 = female death-rate (average) 0·61 per 1000.

III.—*Imperfectly Sheltered Parishes (1743 Females).*

Meeth	91	—	Drewsteignton	378	2
Broadwood Kelly	132	—	Throwleigh	149	1
Jacobstowe	113	—	Sourton	217	—
Exbourne	167	1	Bondleigh	67	—
Sampford Courtenay	429	2			

Total deaths, 6 = female death-rate (average) 0·34 per 1000.

north-east 0·55 per 1000 died, and in the parishes partly so exposed 0·51 per 1000. In the case of pneumonia, however, even more than in that of phthisis, it is desirable to consider separately the female death-rates, because the women are presumably generally near their own homes, whilst the men may be at work in other parishes, and because the women's occupations are more uniform than the men's. Accordingly, Table III. has been drawn up dealing exclusively with female deaths at the same ages, and in this the contrast becomes much more striking. Whereas in parishes sheltered from the north-east only 0·26 per 1000 died, in the parishes fully exposed to the north-east 0·61 per 1000 died, and in the parishes partly exposed 0·34 per 1000. It must, however, be remembered that this result is from a single and rather sparsely populated sanitary area, and that the figures dealt with are very small. It is worth presenting to you only as a suggestion of the desirability of further inquiry, and as an interesting corroboration of previous observations made by other methods. This relation of wind and pneumonia is one of which nowadays we hear very little. Yet it surely is one of some practical importance. The winds which appear to have the power of causing the disease seem almost everywhere to be cold and dry. *Temperature*, in fact, seems to enter largely into the causation of pneumonia, low temperature and wide variations appearing to promote the occurrence of the disease.

Bronchitis is often considered to be affected by the same influences as pneumonia. But this apparently is not altogether correct. The distribution of bronchitis, in the United States in 1880, was by no means the same as that of pneumonia; also Sturges stated that at Gibraltar different winds appeared responsible for the two diseases—the east, which is damp, seemed to promote the occurrence of bronchitis; the west, which there is dry, the occurrence of pneumonia. It would appear that whereas dry cold tends to cause pneumonia, damp cold rather tends to cause bronchitis. On the other hand, a warm moist atmosphere has undoubted therapeutic value in the drier varieties of bronchitis. In how many disorders can we so confidently recommend a health resort as we advise Torquay or Falmouth in bronchial irritation?

Cancer.—Turning to other diseases. Of the climatology of cancer we may certainly say we know nothing of importance. Haviland's suggestion that the disease is chiefly prevalent in river valleys which are periodically flooded is one which, in Devonshire at all events, I cannot substantiate. But I admit my endeavours have been very limited. In tropical countries I think the evidence is strong that amongst natives living under usual conditions it is relatively rare.

Heart disease has a climatology well worth looking into. Haviland held that it was most prevalent in places not well flushed by wind. But very little has been done on the subject. Only a few years ago authoritative statements were made in reference to a district well known to me which were the direct reverse of the facts.

Nephritis.—Here again very little has been done, although more information seems at our disposal than in the case of heart disease.

Some other diseases.—For *asthma* we have a good deal of empiric knowledge, the chief fact being its capriciousness. *Gout and rheumatism, dyspepsia, anæmia, neurasthenia, neuralgia, and convalescence from acute diseases* have, apart from balneology, each a certain useful climatology of its own, but discordant statements are made in respect of them.

The importance of considerations such as the foregoing may be made still more obvious by also regarding them from the points of view of diagnosis, prognosis, prevention, and treatment.

IMPORTANCE IN DIAGNOSIS.

The question whether a patient has resided in the tropics is a familiar one to all of us in dealing with a travelled person and an obscure complaint. Similarly we recognise the value of knowing the haunts of malaria and of hydatid disease. But how often do we think it helpful to consider whether a case comes to us from a neighbourhood, where we could easily ascertain that tuberculosis or cancer is exceptionally rife? Yet this inquiry is scarcely less reasonable than the question whether the family history of the patient presents an unusual frequency of tuberculosis or cancer. The undue commonness of cancer or tuberculosis in a family should, most people will agree, make us doubly careful in our search for it in a suspicious case. Equally I would submit that the fact of residence in a district where one or other is exceptionally frequent should lead to unusual care in setting aside its diagnosis. There are districts in England where phthisis is six times more prevalent, and districts where cancer is almost three times more prevalent, than in others.

Again, in estimating the liability of the individual before us to cancer, certainly in making the difficult and essential early diagnosis, when no element of probability should be beneath our notice, has it ever occurred to us to wonder if the so-called cancer age is the same in all parts of the country?

Cancer Ages in North-East Cornwall.

The following figures suggest that it is not. The north-east of Cornwall is a region of unusual longevity, and if senility of tissue is a more or less necessary condition for the commencement of carcinoma it might be reasonably expected that the cancer age, where longevity is relatively greater, might be more advanced than in the large centres of population, where, as I have shown, longevity is so remarkably less. My friend, Dr. W. F. Thompson, medical officer of health of Launceston, has furnished me with the returns on which the accompanying tables are based. (See Table IV.)

TABLE IV.—*Cancer Ages in North-East Cornwall: Percentages of Cases dying at Various Age-periods.*

All Organs.

	England and Wales (1891–1900) 221,169 deaths at 35 and over.	Launceston and Camelford Registration Districts (1897–1907) 176 deaths.
Age 35–44	10	4
,, 45–54	22	12
,, 55–64	29	28
,, 65–74	26	29
,, 75 and over	11	25

Stomach.

	Various London Hospitals (Fenwick, 1902), 832 cases.	Same districts and period, 44 cases.
Age 30–40	14	—
,, 40–50	29	11
,, 50–60	33	13
,, 60–70	18	34
,, 70–80	1·5	31
,, 80 and over	—	11

Uterus.

	Two Manchester Hospitals (Sinclair, 1896), 131 cases.	Same districts and period, 19 cases.
Age under 30	2	—
,, 30–40	26	—
,, 40–50	42	16
,, 50–60	26	37
,, 60–70	3	31
,, 70 and over	0·7	16

Breast.

	Middlesex Hospital (Sheild, 1898), 831 cases.	Same districts and period, 21 cases.
Age 25–40	14	—
,, 40–50	32	19
,, 50–60	29	19
,, 60 and over	25	62

In the first I have compared the distribution of all cases of cancer, in the successive decades from 35 onwards, in Launceston and Camelford registration districts, with the age distribution in England and Wales generally. Clearly, in the Cornish districts the age of greatest frequency comes about a decade later than in England and Wales at large. The figures, however, are small for the Cornish districts, and I have therefore sought confirmation in a separate consideration of the ages in different organs. In their case I have compared the ages, not with the country at large, but with those quoted by well-known authorities from great hospitals in crowded towns. In Launceston and Camelford districts it would appear that the ages of chief commonness of cancer of stomach, uterus, and breast are in each case almost 20 years later than those observed in certain great city hospitals. These differences are very remarkable, though such small figures can only be taken as suggestive. If their indications are true, the probability of cancer in a patient of 40 years of age in such districts as these two in north-east Cornwall is definitely less than in these large centres of population. May not such differences be found to be partly climatic?

IMPORTANCE IN PROGNOSIS.

Turning next to prognosis, it is curious to contrast the stress laid on it by the ancients with our modern avoidance of it. Hippocrates attached as much importance to its correct estimate as our patients do now. We, on the other hand, think we show our wisdom by declining to prognose, and, as so generally is the case, atrophy tends to follow disuse. Amongst other conditions of which we may acquire knowledge is the difference in the expectation of life in some chronic diseases in different parts of this country. *Rheumatic fever*, for instance, is commoner in a certain midland town than it is near Exeter. Therefore the prognosis of a young valvular heart case should be better near Exeter than in that town. I have in mind a case of heart which got much worse in that place and greatly improved near Exeter, a case which led me to inquire as to the commonness of rheumatic heart disease in the neighbourhood I refer to. Again *bronchitis and emphysema* used to form, I remember, a large proportion of the out-patient cases at University College Hospital, London, when I was a house physician there. On the other hand, I found it rather uncommon at the Exeter Dispensary and in my wards at the Royal Devon and Exeter Hospital. The prognosis of emphysema should therefore be presumably better in Exeter than in London. Similarly, if the pulmonic circulation is less liable in Exeter to the accident of bronchitis, the prognosis of *mitral disease of the heart* should also be better in Exeter than in London. I believe it to be so, and to this point I shall presently return.

But the local differences are probably much wider than these few examples indicate. I was greatly struck, a few years ago, by a statement published by a justly celebrated physician as to the prognosis of aortic regurgitation. His experience was drawn from a densely populated area, and he had never seen a case of aortic regurgitation which survived the discovery of the lesion for more than 15 years. Yet much longer survivals are common enough in Devonshire. For instance, one young woman, with a well-marked aortic regurgitant murmur, which I heard 20 years ago, is still going about almost as well as ever, although her heart is larger and the murmur louder and more widely audible. Had the statement I refer to come from a less reliable source I should probably have disregarded it. But, coming whence it did, it set me thinking. I knew that the longevity of our Devon country districts is remarkable, and it seemed to me worth inquiring what differences in general longevity existed between different parts of England and Wales. Accordingly, I calculated, for every registration district in England and Wales, and for the decade 1891–1900, the percentage of the total deaths, which were formed by those occurring at 75 and over, and found the most extraordinary disparities. Whereas in many districts 25 per cent. of the deaths occurred at 75 and over, in many others only 7 per cent. and less occurred at those ages. In one Yorkshire rural district the percentage was actually 29·4, whilst in one great industrial centre it was as low as 2·2. I tried to discover how far a difference in infantile death-rate would explain the disparity, and found it only went a very little way. It seemed almost impossible to explain away the differences by the movement of younger lives to the great centres of population from the rural districts. Both of these factors helped undoubtedly to account for the disparities, but to no very great extent. There seems no doubt that a very marked difference exists, in expectation of life generally, between the great towns and the country districts. If so, surely this must affect the prognosis of almost all chronic disease, and as most of our efforts at prognosis, inadequate as they sometimes have been, emanate from our crowded centres, there surely is need for extensive inquiry into the prognosis of these complaints in our rural areas, where I am sure the outlook is different. Moreover, if density of population has this effect, is it not possible that by comparing rural populations with each other we may come to discover climatic factors also which tend to modify longevity? This seems to me an investigation which promises to repay the trouble it would entail.

IMPORTANCE IN PREVENTION.

If it be true that a certain disease is specially rare in a certain place, and if good reason can be shown that this rarity is not merely fortuitous, may we not hold that a patient prone to that disease will, by residing in that place, have a specially good hope of avoiding the disease?

Such a consideration applies to tuberculosis, and one chief reason why I have devoted so much time in endeavouring to establish the value of shelter from rain-bearing wind in lessening the frequency of pulmonary tuberculosis is because I see, in places so sheltered, the most suitable place of residence for those in whom tubercle has become quiescent, or for those who belong to families whose proclivity to tuberculosis is pronounced. I feel sure that there are districts in England which cases of phthisis would be wise to avoid and where sanatoria ought not to be erected.

Similarly, I think that there are districts where old people with strong cancerous family history should not settle, and districts where those who have had repeated attacks of pneumonia run some risk in residing. One cannot be dogmatic yet on these two latter points, but would it not be well if one could?

IMPORTANCE IN TREATMENT.

Once upon a time the medical faculty of this country laid much stress on climate in the cure of consumption. Now the fashion has changed. For (softly be it spoken) there is a fashion in therapeutics not so very far removed from a fashion in frocks! And there is a type of mind which accounts for much of this fashion. It may be described as the uni-dimensional mind, a type of intelligence which only discerns one cause for a single effect. Thus, do open-air methods of treatment hold out new hopes? Then climate and drugs are to be discarded! Is tuberculin found to be valuable? Then sanatoria are to be decried! To the misapprehension induced by this sort of mind has climate, I believe, succumbed in the therapeutics of phthisis. What right have we at present to believe that the methods of open air, graduated exercise, and tuberculin administration cannot be aided by judiciously selected climates? It may be that they cannot. But it is wholly unjustifiable to assume it. In his Harveian oration, only two years ago, the late Dr. Theodore Williams, whose practical comparison of climates remains as a model for us all, stated that the results of the Swiss high-altitude sanatoria were twice as good as those obtained at ordinary levels. More recently, on the other hand, Professor Schaudinn has reported sanatorium results in Denmark almost at sea-level as good, he says, as those in the Alps. Here is a divergence of opinion surely badly in need of being cleared up. The comparison of results from sanatoria is a peculiarly difficult one. So much depends on the type of case admitted, the class, the duration of stay, and, even more, on the mode of arriving at the diagnosis and the particular bias in classifying results. If, as in one recent instance, cases are discussed as phthisis in which bacilli could not be discovered, surely the door is open to errors of the gravest sort. If comparisons are made between different sanatoria, surely only cases should be taken into account in which bacilli have been demonstrated, and these should be grouped on some uniform plan according to stage and type. Again, it has perhaps been forgotten that no European resort nowadays claim such success as Dr. Fuentes, quoted by Archibald Smith, assigned in 1858 to Jauja in the Peruvian Andes. 1858 is no doubt a very long while ago, and since then Koch's discovery of the bacillus of tubercle has drawn a barrier of demarcation across the history of phthisis investigation, so that all antecedent statements require confirmation. Yet it is worth recalling that in the interesting and valuable series of cases of high-altitude treatment of phthisis published in 1869 by Sir Hermann Weber, in a paper read before the Royal Medical and Chirurgical Society, the most successful were those which were sent to the Andes. That high altitude has a value in other diseases, such as certain cases of asthma, of Graves's disease, and of malaria, is admitted: why not in phthisis?

If anyone is desirous of testing anew the value of the Peruvian Andes, the present time would appear to be propitious. The terrible Isthmus of Panama has been shorn of its malaria and "Yellow Jack." Good steamers carry the traveller from England to Callao in 28 or 30 days, and the Oroya Railway traverses in 48 hours huge passes which formerly had to be painfully crossed on mule back. Whether Spanish food and housing have progressed in the Andes, as they have in parts of modern Spain, I do not know. If so, not so very much has to be complained of. But it is

unlikely, and those who go will probably have to be prepared for roughing it in the way both of quarters and cuisine.

In short, taking into account all the foregoing, there can be no doubt of the immense importance of medical climatology however we regard it, whether from the standpoint of diagnosis, prognosis, prevention, or treatment. We already possess valuable information in all its various branches; if I have barely mentioned medical geography and history, it is because in those the importance of our possessions is unquestionable. As I have said, it is when we come to the theory of the subject, the scaffolding on which we depend so much for the further advancement of our building of knowledge, that we find our footing so seriously insecure.

THE PRESENT NEGLECT OF MEDICAL CLIMATOLOGY.

But if the importance of medical climatology is great, great also is the present general neglect of it. That more and more valuable information is continually becoming available only seems to interest the few; for the many, the references in the text-books are shrinking, the student hears less and less about the subject as time goes on, and the busy practitioner, so trained, naturally does not trouble himself very greatly in regard to it. As Sir William Whitla expresses it, in his chapter on phthisis in his recent work on the "Practice of Medicine": "The view is gradually gaining ground that there is no special curative element in any special climatic conditions" (p. 1353); and (p. 1297): "Climate on the whole must be said to play a minor rôle in its causation."

What is the consequence? The late Dr. Solly, of Colorado Springs, put it with such clearness in 1897 that I cannot do better than quote his words:—

> If we consider (he wrote) how great a sacrifice of time, money, inclination, and affection is involved when an invalid, under direction of a physician, leaves his home and journeys into another and perhaps a far country, we marvel at the small amount of thought and study that is bestowed by the majority of physicians upon the science of medical climatology; for without a fair knowledge and appreciation of this no rational selection of climate can be made.
>
> The deficiency begins (he continues) with the medical schools, which should teach at least the broad principles of climatology and the outlines of climatic therapeutics. What would be thought to-day of the physician who diagnosed and prescribed for a disease of some organ of whose structure and physiology he was ignorant, or of the surgeon who proceeded to operate upon parts the anatomy of which he had not studied? Why, then, should a physician presume, as so many do, to prescribe a climate without having acquainted himself with the meteorological facts and climatic data, and with their meaning and significance?

It is 16 years since these words were written. Yet they apply now just as much as they did then. There is no department of medicine in which so much ignorance prevails or in which such culpable carelessness is tolerated. If we accept the definition I have given of climatology, the seriousness of the existing point of view at once becomes manifest. Neglect on so large a scale must have more than trivial consequences, and it is not surprising to find that the consequences are common and disastrous. This is all the more regrettable at the present time, when the growth of the ancillary sciences, especially of geography and meteorology, the increasing number of stations at which weather observations are recorded, the publication of works of reference, and the multiplication of admirable maps, orographical, geological, and meteorological, are putting at our disposal invaluable means and methods of investigation.

SOME REMEDIES FOR THIS NEGLECT.

For such a state of affairs a remedy will have to be found. In what direction shall we turn with most probability of discovering it? As in physical disease diagnosis must precede treatment, so here our first inquiry must be, "What are the reasons for this neglect?" I believe that they will be found in climatology itself. Solly refers to one of the causes:—

> On turning to the mass of literature available upon climatological subjects, we find it largely composed of empirical and biased accounts of various health resorts, and that these reports differ little in their statements of the advantages to be derived. Commonly each claims for its own resort the ability to cure all diseases, and the only invalids warned against coming are those in whom disease is far advanced. The facts given are few, and logical deductions from them are rare. In despair of making a choice from such sources the physician is apt to take the casual opinion of patients or of other laymen who have visited certain resorts and to select the climate accordingly. He cannot, however, form a correct judgment from such information unless he has previously grounded himself in the fundamental principles of climatology and studied the recorded facts. In this desert of rubbish there are, nevertheless, bright oases of truth and reason, such as are to be found in the writings of Weber, Hirsch, Jourdanet, Lombard, Vivenot, Rohden, Copland, Davidson, Denison, Yeo, the Williamsons (father and son), and others.

Here in the department of medical geography there is clearly room for reform. And there is every indication that workers are moving towards it. In recently dealing with one small section of Dr. Neville Wood's valuable volume on the "Health Resorts of the British Islands," I was much impressed by the sincere desire evinced throughout the health resorts of the south-west of England to present to the medical public a faithful picture of their merits and demerits. Too sanguine statements of my own, from limited central experience, were ruthlessly cut down from closer knowledge by my local correspondents. Rarely did it seem to me that even local enthusiasm had stepped ahead of certainty. The method pursued in that work of combining a central observer with local reporters seems to me one which may be widely extended with advantage. Moreover, a centrally placed writer dealing with very large numbers of patients spread over many health resorts, as was the case with the late Dr. Theodore Williams, can furnish invaluable dispassionate comparisons of results obtained in one place with those gained in another. Williams's careful observations upon selected cases disposed of the claims of Pau and went far to establish the value of Davos.

Of such summaries we have far too few. It was Sir Hermann Weber who, by this sort of comparison, drew widespread attention in this country to high altitudes, and particularly to the Peruvian. Needless to say, the utmost care must be taken to contrast only cases which are actually comparable, and not to draw conclusions from numbers which are inadequate. Moreover, the summaries must, of course, be unbiased. As I have already indicated, our theories of climatology are far too immature to allow them to colour our judgment of the facts. For years to come we must be satisfied to patiently record observations, however unexpected, however inexplicable some of us may consider them to be.

But more than this is necessary. It is beginning to be suggested that climatology should be specially taught, that there should be special chairs of climatology in our medical schools. That must ultimately be so, and although the time seems scarcely ripe for a separate chair of climatology, a combined chair of what Dr. Fortescue-Fox has well called hydrology and of climatology should undoubtedly be established somewhere in this country. Not only is the time ripe for it, but England has already fallen behind other countries in this respect. This is especially unfortunate, since the materials for climatic investigation in England are second to none in richness and accuracy. Such a chair would go far to stimulate much-needed investigation, and it is to be hoped that its establishment will not be long delayed.

But we must learn as well as lecture. And the question arises in what way? Shall I be pardoned if I insist upon a principle about which I have recently written? It seems to me to go deep towards the foundation of a sound science, not perhaps affording a sufficient remedy for our uncertainties, but possessing merits which cannot be overlooked. I allude to what I have called "the principle of approximate isolation of influences." Hitherto it has only been imperfectly recognised, if indeed it can be said to have been definitely recognised at all. Yet without it I can see no escape from the theoretical chaos which confronts us. By such approximate isolation I mean not merely the happy-go-lucky elimination of this or that influence in the investigation of a third, but the systematic enumeration of all the known influences which seem to affect the field of inquiry besides the influence in question, and their successive elimination from the problem in one way or another, so far as that is possible. The process naturally is neither easy nor short.

Let us ask ourselves what progress would have been possible in bacteriology if investigators had continued to work with the mixed broth cultures of Pasteur? What precision of knowledge could we have attained as to the life-history of the majority of micro-organisms? Modern bacteriology may be said to date from Koch's discovery of isolation methods. Similarly (though unhappily no such absolute isolation is here possible), if climatology is to take its true place in medicine, some sort of isolation of influences will have to be attempted.

The older literature of the influence on phthisis prevalence of altitude or of soil is fairly comparable to the mixed broth culture of the micro-organisms. In neither was a serious systematic attempt made to eliminate other known influences. Müller's work on altitude and phthisis

in Switzerland, which I shall discuss in detail in my next lecture, goes farthest in this direction, but not far enough. He eliminated the influence of occupation by considering separately agricultural, industrial, and "mixed" populations, and got rid of the effect on the figures of imported cases of the disease by deducting the percentage so imported in each locality. But although he gave interesting notes on soil and social conditions other than occupational, he made no attempt to eliminate their effect, nor do his notes suffice [illegible] carry it out.

Buchanan in his Reports to the Privy Council on the relations of phthisis to dampness of soil eliminated no other influence. Density of population, difference of occupation, and other social factors, all obviously liable to affect his figures, were allowed to confuse his problem; and his method of manipulating his figures by guesswork, to correct for imported cases and for the presence of institutions, cannot be too strongly condemned.

In the second lecture I propose to furnish illustrations—first, of the systematic application, and second, of the neglect, of this principle. For its systematic application, I am sorry I can only refer to my own work, and I shall do so very briefly, as it has already been sufficiently enlarged on elsewhere. The results of the neglect of the principle I shall illustrate by a revision, in the light of it, of the so-called "altitude theory of phthisis immunity," and show that, so reviewed, the existing evidence in favour of that theory absolutely crumbles to pieces.

AN EXPOSITION OF THE

ABDUCTION TREATMENT OF FRACTURE OF THE NECK OF THE FEMUR.[1]

BY ROYAL WHITMAN, M.D.

IN each of the numerous papers that I have written upon this subject I have explained at length the principles and the application of the abduction treatment and have further illustrated the text with diagrams. For, as the treatment is adapted to the anatomy of the hip-joint and is a mechanical proposition, it is on that account apparently the more difficult to understand, or at least to accept.

The Anatomical Basis of the Treatment.

The normal inclination of the neck of the femur of about 130° permits a range of abduction at the hip of about 40° to 50°. (Fig. 1.) During the movement of abduction the head of the femur glides downward until the lower third emerges from the acetabulum and distends the lower part of the capsule. (Fig. 2.) At the limit of abduction under anæsthesia the base of the neck is in contact with the rim of the acetabulum, the tissues covering the trochanter are apposed to the tissues covering the pelvis, and the capsule is tense.

It should be evident that any change from the normal, either in the forward, backward, or upward inclination of the femoral neck, must induce a corresponding change in function. Shortening of the neck or loss of its normal angle would, for example, limit the range of abduction, and this limitation is almost always present after fracture of the neck of the femur treated in the conventional manner, even when union has been attained.

The Adaptation of the Treatment to the Anatomy of the Part.

In complete fracture of the neck of the femur the limb is usually shortened, somewhat flexed, rotated outward, and often slightly abducted. (Fig. 3.) Thus the outer fragment is turned forward, displaced upward, and usually lies on a lower plane than the head. As one has no control over the inner fragment, contact can be assured only by adjusting the outer fragment to it. (Fig. 4.) This is accomplished as follows:—

The patient having been anæsthetised is lifted to a sacral support, the shoulders resting on a box of equal height, while the extended limbs are supported by two assistants. The assistant holding the sound limb then abducts it to the anatomical limit to illustrate the normal range, which varies in different individuals and at different ages, and incidentally to fix the pelvis by direct bony contact. The operator first flexes the thigh to disengage the fragments. The assistant then extends the limb and by manual traction overcomes the shortening, as demonstrated by the relation of the trochanter to Nélaton's line, and by measurement. He then rotates it inward and under traction abducts it to the normal limit, the operator meanwhile lifting the thigh from beneath. Inspection should now show absolute correspondence between the extended limbs, as to abduction, rotation, length, and position of the trochanters. In this attitude the injured part is securely fixed by a plaster spica extending from the nipples to the toes.

The advantages of the abduction treatment should be obvious to one who understands the mechanism of the joint. 1. In abduction the outer fragment is turned downward and inward toward the inner fragment. 2. In full abduction under traction the capsule is made tense, and being attached about each fragment this tension should align them. 3. At the limit of abduction the trochanter is brought into contact with the tissues covering the pelvis, or if the fracture is near the head the outer fragment is engaged beneath the rim of the acetabulum, thus providing a direct check against displacement. (Fig. 5.) 4. In abduction the direction of the muscles is so changed that their contraction can no longer displace the fragments. 5. Finally, the attitude of abduction, which is so directly opposed to that indicative of deformity and symptomatic of weakness, is the attitude most favourable to restoration of function when the support is removed.

Attention is especially called to the sequence in the manipulation: (1) disengagement of the fragments; (2) complete reduction of shortening by traction in the line of the body; (3) abduction to a degree that shall make the capsule tense; and (4) fixation in complete extension, in order to force the upper extremity of the femur forward against the tense anterior wall of the capsule.

The Abduction Method of Correcting the Deformity of the So-called Impacted Fracture.

True impaction, in the sense of one fragment being driven into the other, must be infrequent and could only be caused by direct violence. What passes for impaction is usually a fracture with but slight displacement; clinically a case in which shortening is slight, in which crepitus is absent, and in which some control of motion, or even capacity for weight-bearing, is retained. (Fig. 6.) These cases may be treated in the manner already described, the deformity being readily reduced by manual traction.

Another type of so-called impaction is the incomplete fracture, the neck being depressed by the opening of a wedge-shaped interval in its upper border. (Fig. 7.) This is most common in childhood, but it is by no means limited to early life.

Such and similar deformities may be easily corrected by the aid of gentle leverage as follows. As normal abduction depends upon the upward inclination of the neck, it must be limited in direct proportion to the lessened or lost angle. Thus, the range of abduction under anæsthesia is checked by contact of the neck with the upper border of the acetabulum, a contact that fixes it. Now under steady traction, aided by downward pressure on the projecting trochanter, the limb is still further abducted, with the aim of overcoming or lessening the deformity. In other words, the deformed neck lies in a plane representing normal abduction while the shaft is in the median line. The shaft is therefore abducted until the normal relation is restored, at least to the degree that is practicable. When this is accomplished, the outward rotation having been reduced, a plaster spica is immediately applied. (Fig. 10.)

This method, in which the only movements permitted are those required to reduce deformity and in which secure support is at once applied, is both safe and effective. The reduction, or at least the lessening, of deformity to a practicable degree should be as much a matter of routine in this as in any other fracture, since otherwise shortening, insecurity, and discomfort are practically inevitable even when union is attained.

In the classical, but unusual, cases of true impaction in which the neck is shortened, corrective manipulation may not be indicated. In fact, in the treatment of every variety of this fracture a thorough understanding of the principles of treatment and common-sense in their application are, in the absence of skill and experience, essential. (Fig. 11.)

[1] A paper read before the New York Academy of Medicine on Jan. 16th, 1913.

Some Criticisms and Suggested Modifications.

Having outlined the principles and the application of the treatment, I propose to cite for comparison and analysis some of the criticisisms and suggested modifications of the method which have come to my notice.

In the fifth edition of "A Practical Treatise on Fractures and Dislocations," by Dr. L. A. Stimson, the following appears:—

Whitman's proposal to abduct the limb under anæsthesia until the trochanter rests against the ileum and then to force the abduction, using the trochanter as a fulcrum, so as to restore the normal angle, does not commend itself to me.

From the sixth edition of the same treatise I quote as follows:—

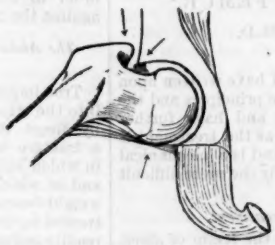
The generalisation of this hasty, forcible correction by wide abduction has of late been urged, it seems to me, with more zeal than attention to the anatomy of the region and the pathology of the injury. No abduction which is wider than a normal neck will permit can recreate a normal neck. The alleged use of contact between the top of the trochanter and the ileum as a fulcrum for such abduction is fanciful, no dissected hip that I have examined would permit the trochanter to be brought within an inch of such contact while the head remained in its socket.

Comparison of this quotation with the description of the actual treatment shows how complete is the writer's misconception. Two years ago I called attention to the error in a communication,[2] yet it appears again in the seventh edition, recently published. Manifestly it is useless to reply to the criticism of an imaginary treatment, so that only a question of anatomy remains.

FIG. 1.

Showing the normal inclination of the neck of the femur.

FIG. 2.



Illustrating the three checks to abduction: Tension on the capsule; contact of the neck and acetabulum; and contact of the trochanter and pelvis.

FIG. 3.

Complete fracture, and the effect of muscular contraction in increasing the deformity.

It has been stated that under ordinary conditions the tissues covering the trochanter were apposed to the tissues covering the side of the pelvis at the limit of abduction. Dr. Stimson affirms to the contrary, that no dissected hip that he has examined would permit the trochanter to be brought within an inch of such contact while the head remained in the socket. The last clause is somewhat ambiguous, since the acetabulum does not contain the head of the femur, at least one third of it being out of "the socket" at the limit of normal abduction. Assuming this anatomical fact to be admitted, I shall refer Dr. Stimson as to the question of contact, to an unprejudiced source—namely, to the investigations of Dr. A. S. Taylor on eight cadavers at the College of Physicians and Surgeons with reference to the abduction treatment.[3]

Abduction was limited by (*a*) the inferior ligaments and capsule; (*b*) impact of the posterior part of the trochanter upon the soft tissues just above the acetabulum. Both of these obstructions seemed to occur simultaneously. ..... Tension of the inferior capsule and its ligaments during abduction tended to cause spontaneous alignment of the fragments. The influence was more marked as the line of division approached the trochanter.

I quote further from Dr. Stimson—

The maintenance of abduction which forms a part of the same proposed practice (abduction treatment) is also an imaginary difference, for continuous traction assures, and always has assured, abduction of the joint by tilting of the pelvis, even when the limb is in line with the body

Traction is usually applied in combination with a side splint that prevents tilting of the pelvis, but if by simple traction it were distorted to the utmost, even to 10° or 15° of relative abduction, it would be no evidence that the deformity had been reduced, but rather that the traction was working at a disadvantage. Dr. Stimson thinks that such incidental and indeterminate abduction as has, he says, always been attained in conventional treatment, is so similar to fixation in full abduction on a level pelvis after shortening has been reduced under anæsthesia that the difference is only imaginary!

In Scudder's book on fractures the abduction treatment is described and favourably criticised. Judging from his own illustrations, however, Scudder favours flexion and abduction, both limbs being fixed in this attitude by what is known as a short spica. I fail to see the advantage of this modification. Complete extension throws the upper extremity of the femur forward against the tense anterior part of the capsule and thus resists the tendency of the limb to sink below the plane of the inner fragment. With the limb in flexion there should be a greater tendency to this displacement, especially when, as in fat subjects, rapid atrophy loosens the support. If the limb is fixed in extension, the patient may be moved easily and may be turned to the ventral attitude to rest the back, a position that could hardly be assumed with both limbs in flexion. Finally, there is a strong tendency toward flexion and adduction during the period of repair, a tendency which is noticeable even when the limb has been held for many weeks in extension and abduction, and which must be more pronounced after fixation in the attitude that Scudder suggests.

In Cotton's treatise abduction of 20° is recommended in the treatment of complete fracture as an alternative to "malleting" the trochanter, with the aim of producing impaction. He thinks that it would be a crime to break up an impaction if the limb were in reasonably good position. If not, the deformity may be corrected and either reimpacted or placed in abduction. It is very evident that Dr. Cotton does not understand the mechanism of the abduction method as a means of correcting deformity or the advantage of full over partial abduction in the subsequent fixation. His advocacy of operative impaction indicates also that union, rather than function, is his standard of success. His conclusions present, however, a refreshing contrast to those of other writers, since he states that a majority of hip fractures are impacted and that union usually occurs in fractures originally unimpacted by the use of the abduction treatment.[4]

Dr. John Ridlon is an advocate of the abduction treatment provided one uses a Ridlon traction machine to reduce the shortening "which cannot be done by hand as Whitman recommends."[5] He asserts, apparently, that the shortening present in a recent fracture of the neck of the femur cannot be reduced by manual traction under anæsthesia, or, in other words, that the fracture cannot be successfully treated without a traction machine. Dr. Ridlon is inclined to positive statements. For instance, the following quotation is from a paper on the treatment of fracture of the neck of the femur, read before the Academy in 1901.[6]

[2] Medical Record, Dec. 24th, 1910.
[3] American Journal of the Medical Sciences, May, 1905.
[4] Boston Medical and Surgical Journal, Dec. 7th, 1911.
[5] Progressive Medical Series, vol. vii., 1909.
[6] Annals of Surgery, vol. xxxiii., 1901.

Let me assure you gentlemen, that in all of these cases a strong and useful union, giving a strong and useful limb, in good position, may be as confidently anticipated as in any other fracture of this bone or any other bone. In no other fracture is the surgeon's task easier, in none is a good result more certain. This despite Scudder's results, namely, in only two cases out of sixteen could it be said that the limb was functionally useful.

The method then advocated which was so extraordinarily successful was the Thomas hip splint, applied without anæsthesia and without traction. Naturally I welcome Dr. Ridlon as a convert to the abduction treatment, for whereas once he considered a strong and useful union giving a strong and useful limb in good position success, he now uses his traction machine "to the end of obtaining a perfect anatomical result." There is no objection whatever to the use of a traction machine, either Ridlon's or another. They are very useful in the cases in which treatment has been delayed, and they enable one to dispense with several assistants, but the only apparatus that is, relatively speaking, essential to success is a firm pelvic support.

Dr. John B. Murphy advises abduction, but states that the attitude cannot be maintained without including the other thigh in the support. I do not know the character of the spica that he applies; possibly it is the pelvic type. I prefer the long spica to include the foot, in which the leverage above and below the injured bone is approximately equal. Security is assured by the complete reduction of the deformity, the tension on the capsule, and the contact of the trochanter and the pelvis, as well as by the skill and experience of the operator in the application of the support. It may be advisable for those who are not expert, and always if one uses the short spica, to include the other thigh, the only objection being the greater burden and restraint which in cases of this class should be avoided if possible.

It may be stated in this connexion that the plaster spica is not an essential part of the abduction treatment. Robert Jones of Liverpool uses a modification of the double Thomas hip brace to fix the limb in abduction, but as the plaster splint is the only one at general command, those who propose to treat injuries of this class should learn the details of its application.

The danger of separating the fragments by over-abduction is often suggested. The proper degree of abduction is usually indicated by that of the sound limb, since it may be assumed that in the ordinary fracture caused by indirect force there is little, if any, loss of substance. If, however, the neck were shortened by a crushing injury, the abduction should be lessened to correspond to the change indicated by the X ray picture. Practically, if the shortening of the limb has been completely reduced, there is far more likelihood of too little than of too great abduction, since the attitude is so novel that the normal range seems an exaggeration, and especially to the nurses, to whom the limb projecting from the bed is most unsightly.

FIG. 4.

Fracture of the neck of the right femur, illustrating the reduction of the deformity by direct traction and abduction. The operator supports the joint. The left limb is abducted to indicate the normal range, which varies in different subjects, and to prevent tilting of the pelvis.

I have always anæsthetised the patient to better assure, in the absence of muscular tension, the complete reduction of deformity and the proper degree of abduction. As this has been urged as an objection to the method, it should be noted that Robert Jones and Walker of New York omit the anæsthetic in routine practice.

The treatment of this fracture by the abduction method, including the application of a firm and comfortable support, is more difficult than any of the routine surgical operations because of the lack of training and experience on the part of those who undertake it. I feel sure, however, that an intelligent novice who understands the principles of the method, and who has sufficient knowledge of topographical anatomy to apply it correctly, can treat the fracture with a better prospect of success than by any of the time-honoured methods with which he may be familiar. There is, furthermore, this great advantage: that if the abduction method is properly applied the surgeon controls the situation, in the sense that he is independent of the coöperation of assistants, which is so essential when traction is employed.

Cases in Early Life.

To complete the presentation of the subject one must include the fracture in early life. This injury, although not uncommon, is rarely seen by the writers on fractures because the patients are not sent to hospitals. In general there are two classes of fracture: (1) that of the neck; and (2) that at the epiphyseal junction.

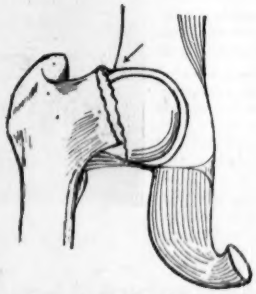
The first is very similar to that in adult life, except that it is often incomplete, and that union with deformity (coxa vara) is the rule without treatment. I have seen but five cases of ununited fracture in childhood; all had been treated by conventional methods in hospitals, doubtless a coincidence rather than a consequence.

The epiphyseal fracture is quite different. It is practically

FIG. 5.

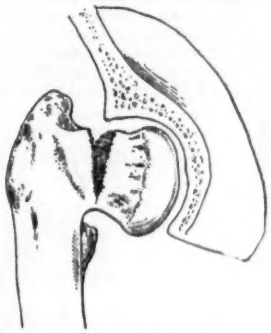
The deformity reduced by the abduction method. Showing the relaxation of muscular tension and the security assured by the attitude.

FIG. 6.



A form of complete fracture, often classed as impacted, in which deformity may be easily corrected by traction and abduction.

FIG. 7.



A form of incomplete fracture with deformity which may be easily corrected by the abduction method.

limited to adolescence, and although it is not uncommon in normal subjects as the result of direct violence, a large proportion of the patients are of the weak, rapidly growing, or over-weighted type. The injury is usually slight, causing an infracture rather than a separation. The patient usually walks about complaining of stiffness and limp, the deformity

FIG. 8.

Fracture of the neck of the femur in a girl 15 years of age. Three and a half weeks after the accident.

of the bone gradually increasing until, after further injury or overstrain, the disability may become complete. The majority of the cases now classified as unilateral coxa vara are of this type.

In the treatment of either form the abduction method is essential, conventional treatment being useless as far as reduction of deformity is concerned. In the epiphyseal form the manipulations of flexion, abduction, and inward rotation must be forcible and persistent. And if the case is of long standing, with forward and upward displacement of the neck in relation to the head, an open operation is required to properly appose the fragments.

It may be of interest to note that I first suggested the abduction method as a means of reducing deformity in fractures at the hip in childhood in papers printed in the *Annals of Surgery* in 1897 and 1900. In November, 1902, in the same publication the treatment in its application to both the ordinary and the epiphyseal form of fracture was described in detail, with diagrams and illustrative cases,[7] and again as a routine treatment for all classes of cases in the *Medical Record* of March 19th, 1904; yet in 1909 Sprengel and Lorenz were discussing their relative claims for priority, each having employed the method in 1908 in the treatment of the epiphyseal fracture. Both surgeons apparently depend solely on violent manipulations to restore the normal relations, but as I have pointed out in previous papers[8] accurate reposition by manipulation is possible only in the comparatively recent cases or in those in which there is not great lateral displacement. In the more advanced type the neck lies somewhat above and in front of the head to which it is firmly adherent. In such cases (Fig. 12) the joint should be opened by the anterior incision. A thin chisel is then inserted between the two fragments to separate and to prize them apart, adjustment being accomplished by traction combined with abduction and inward rotation of the limb, aided by the leverage of the instrument. It must be borne in mind that in epiphyseal fracture the joint is directly involved, and for this reason operative intervention is indicated if the deformity cannot be reduced by manipulation. Functional recovery is the rule in cases treated in this manner.

Objects of Treatment.

Thus far fracture of the neck of the femur has been considered as if the question at issue were of the most efficient means of reducing deformity and fixing the fragments, as the essentials for repair and for functional recovery. The conventional point of view is, as is well known, quite different. According to Stimson:

> The ideal object of treatment, restoration of form and function, is rarely to be attempted or even sought. The first indication is to save life, the second to get union, the third to correct or diminish displacements.

As many of the patients are old and feeble, a certain proportion might well be considered as inoperable—the class, for example, in which the saving of life is the first indication. Having excluded these patients from consideration one might then discuss more intelligently the proper treatment of the fracture. Strangely enough, however, the favourable class has always been subordinated to the other. Nearly all the patients receive some treatment, but the

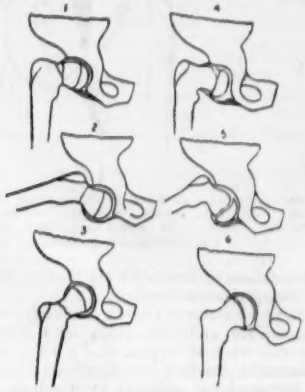
FIG. 9.

X-ray picture taken six months later showing restoration of the normal contour.

standard is set by age and weakness; a vigorous subject may get more of it, but the quality is the same for all.

According to Bissell,[9] the routine treatment in the St. Vincent's, New York, and Bellevue Hospitals, where the patients were under the "care of 16 well-known surgeons, many of them eminent teachers in surgery," was either the long side splint with traction, or sand bags and traction, or, in a small proportion, traction in suspension by the Hodgen splint. The actual treatment was usually applied by the house surgeon's assistant. His conclusions are that neither coaptation nor fixation was assured by these methods, and

[7] The following figures illustrating the abduction method of reducing



deformity of the fracture at the neck and at the epiphyseal junction appeared in the *Annals of Surgery* for November, 1902.

[8] Medical News, Sept. 24th, 1904, and Medical Record, Jan. 2nd, 1909.
[9] Philadelphia Medical Journal, May 30th, 1903.

that operative intervention was indicated therefore in many instances, because he says, "by this means we can hold out a hope to a class of patients, the vast majority of whom, medical literature and medical opinion and practice as well, have heretofore given over as hopeless." (Fig. 13.)

This paper was written in 1903, but the date is immaterial since the conditions have not changed in generations. One appreciates the soundness of Stimson's advice in placing the "getting of union," which is determined by the character of the injury, before the "correction or diminution of displacements," by the means or in the manner that must be accepted as representative.

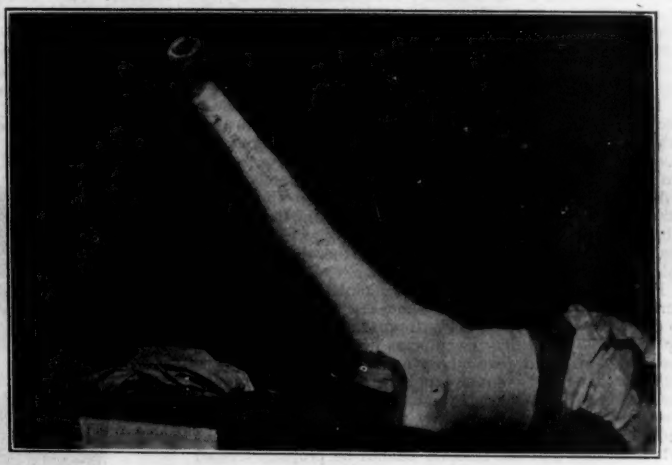
Causes of Non-Union.

Union is the conventional standard of success, but failure to attain it is not usually ascribed to the quality of the treatment, but to circumstances for which the surgeon is not responsible. For example: (1) age and the danger of constraint; (2) deficiency of blood-supply; and (3) spontaneous absorption.

Age, which limits the prospective enjoyment of restored health, contrasted with the discomfort or danger that the effort to regain it may entail, is a very effective argument against applying a remedy in which one has no confidence, and especially so in this instance, since if the patient is not old in years the injury itself may be accepted as evidence of premature senility.

The actual danger of treatment as distinct from that of the injury is conjectural. In a total of 316 cases of fracture of the neck of the femur treated at St. Vincent's, New York, and Bellevue Hospitals, reported by Bissell,[10] there were four deaths—one immediately after admission, one from pneumonia, and two from alcoholism and nephritis. In my opinion far more patients die for want of treatment than because of it. Pain and the restraint caused by it, bedsores which are its consequence, and the mental depression induced by the prospect of certain disability, are far more dangerous than effective treatment.

FIG. 10.



Plaster spica, showing adjustment to the pelvis.

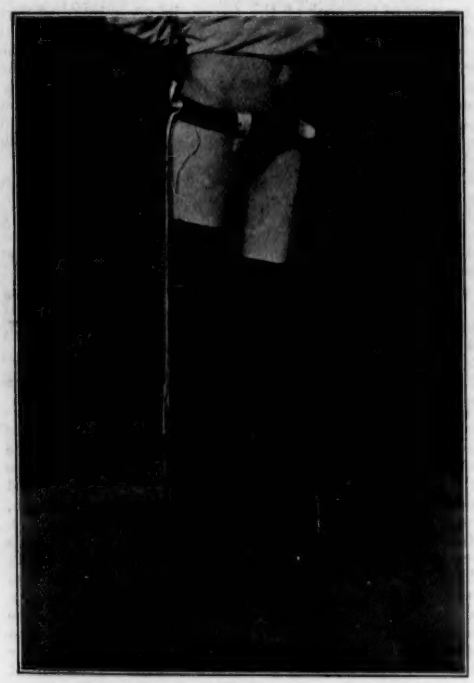
I take this occasion to say that I regard the abduction method as not only the most efficient but the most comfortable and the least dangerous of any treatment of this injury. It relieves pain, it permits change in posture, notably elevation of the head of the bed, and contrary to the general belief, it is the best preventive of bedsores. I have applied it recently to a patient 88 years of age, whose mental and physical condition improved while she was encased in a long spica.

Deficiency of blood-supply can only be accepted as an adequate explanation of non-union if contact of the fragments has been assured, since under such conditions union has been attained in every variety of the fracture, in the old as well as in the young, and even after months of separation when at open operation the fragments have been freshened and apposed. In connexion with the question of blood-supply, Dr. John B. Murphy has described a case of fracture in a youthful subject on whom he operated for non-union. The head of the bone was dead, because, he says, its circulation had been cut off by a twist of the ligamentum teres. Yet this head was revivified by penetration of blood-vessels from the neck fragment, and was so perfectly reconstructed and replaced that function was completely restored. I have operated on a relatively large number of cases of this character, and have never found a dead head in a young subject, but if such regeneration is possible it is certainly very encouraging to the advocates of positive treatment.

The third cause of non-union is thought to be spontaneous absorption of the neck. Dr. Murphy regards this as inevitable in a certain class of fractures because of the arrangement of the blood-vessels. The explanation is not convincing, since union in such fractures may follow without loss of substance when treated effectively. A far more reasonable explanation is non-apposition—softening without the opportunity for adhesion, friction, and atrophy.

Analysis of conventional teaching indicates that its assumptions are based on defective treatment. This is the actual reason why surgical principles are not applied; and it is the failure to apply them rather than the inherent incapacity of the tissues for repair that accounts, in great part at least, for the quality of the results. It is the general

FIG. 11.



Hip splint to permit walking without weight-bearing, used during period of convalescence.

[10] Loc. cit.

recognition of the futility of treatment that explains its perfunctory application, and the neglect of subsequent supervision that is so necessary to functional recovery, the patient passing from observation with the advice to use the limb as soon as a partial capacity for weight-bearing is restored. Cotton, for example, evidently considers himself conservative in saying, "I never feel safe in allowing weight-bearing before eight or ten weeks, and then only cautiously."[11]

It should be evident that repair of this fracture must be very slow, especially if it be of the small part of the neck, where there is apparently little external callus formation. Also that the lessened angle which is almost always present, unless the deformity has been primarily corrected, must subject the weakened part to far more than the normal strain. In such cases it is probable that the deformity is directly increased by early weight-bearing, which in turn leads to nutritive changes that still further disorganise the joint.

Furthermore, in fractures involving joints there is always a period of restriction of motion and discomfort, in part due to disuse and in part to the intra-articular changes caused by the injury and by the process of repair. In weight-bearing joints, and particularly at the hip, this period is prolonged, and the voluntary and involuntary adaptation of the muscles to weakness and discomfort leads almost inevitably to distortion, notably to adduction and flexion, and consequently to unnecessary shortening and insecurity.

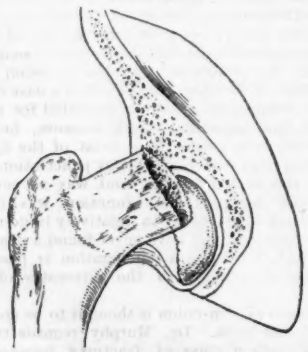
It is obvious that this fracture cannot be properly treated in a general hospital. I might suggest, however, that if the abduction method were applied in selected cases, the reduction of deformity being confirmed by X ray pictures, which can be taken through the plaster, the patients might be transferred to their ultimate destinations within a few days after admission, since only the ordinary care and attention that might be provided by members of the family is essential.

Some Details of the Abduction Treatment.

The routine of the treatment varies in different cases. The patients can be moved and turned at once. Children cannot be restrained, but often insist upon walking about within a week or two, and with the limb fixed in abduction apparently no harm follows. Vigorous adults are often able to get about on crutches in three or four weeks, but in the older and weaker class walking should not be attempted.

The period of fixation varies from 8 to 12 weeks or even longer. Sometimes the long plaster support is changed in six weeks for a shorter one, or it is cut off at the knee to permit movement at this joint. When the spica is

FIG. 12.



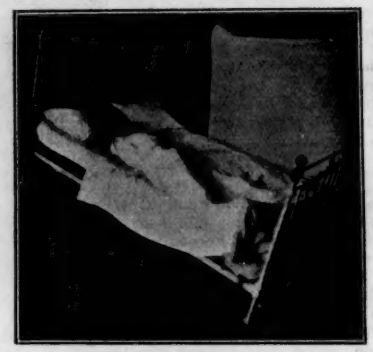
Epiphyseal fracture with displacement in which the open operation is indicated.

removed massage and passive movements are, of course, of great value, but the only essential manipulation is to draw the limb outward to the extreme limit of abduction several times a day. Crutches are used when the patient has regained sufficient strength and confidence to make locomotion safe.

Weight-bearing should not be permitted until sufficient time has elapsed to assure firm union, confirmed if possible by X ray pictures, nor until the essential movements at the hip are relatively free and under control. As the stage of recovery may extend throughout a year, some form of perineal crutch which permits locomotion without direct strain is a valuable adjunct in treatment.

The open operation is rarely indicated primarily, except in the epiphyseal type of fracture in which the fragments are displaced and adherent. It is indicated for non-union in suitable cases. The joint is opened by an anterior incision from the anterior superior spine to the base of the neck. The

FIG. 13.



The abduction method applied to a patient 73 years of age.

fragments are freshened, apposed, and fixed in contact for a sufficient time by a drill passed through the shaft, neck, and into the head. In such operations one has the opportunity to demonstrate the value of abduction in apposing the fragments, the required degree being in direct proportion to the loss of substance of the neck. In cases of long standing, in which union is impossible, the head should be removed and the trochanter implanted and fixed in the acetabulum to assure the capacity for weight-bearing at the expense of movement.

Fracture of the neck of the femur, in my opinion, differs from other fractures only in that it presents from every point of view greater difficulties in treatment. As far as the operable class is concerned the problem, therefore, is the same—namely, to reduce deformity, to appose the fragments, and to protect the weakened part during the period of repair. It is in this comprehensive sense that I would contrast the abduction treatment with conventional principles and practice.

Eight years ago, in presenting a new treatment at a meeting of this Academy, I was obliged to appeal to reason rather than to experience, but now the experience of many surgeons has confirmed my contention that surgical principles may be applied by this method with success. In the interest of a neglected class of patients I have not hesitated to criticise individuals, and especially one individual who is the most positive and forceful advocate of the established order, but I have presented their views by direct quotations, and this is the only consideration that I ask in return.

New York.

[11] Boston Medical and Surgical Journal, Dec. 7th, 1911.

THE INTERNATIONAL SOCIETY OF SURGERY.—The Fourth Congress of this International Society will take place in New York from April 14th to 18th, 1914, under the presidency of Professor A. Depage, of Brussels. The three subjects before the Congress will be: 1. Gastric and Duodenal Ulcer (Reporters: M. de Quervain, M. Hartmann, M. Lecène, Dr. Mayo, Sir Berkeley Moynihan, and M. Payr). 2. Grafting and Transplantation (Reporters: Dr. Alexis Carrel, M. Lexer, M. Morestin, M. Ulmann, and M. Villard). 3. The Technique of Amputations (Reporters: M. Binnie, M. Ceci, M. Durand, M. Kuzmik, M. Ranzi, and M. Witzel). The meetings will be public, but members of the society alone have the right to take part in the discussions, which will be confined to the questions on the order of the day. For further information, apply to Dr. Ch. Williams, President of the International Committee, 6, Place St. Michel, Ghent; or to Dr. L. Mayer, 72, Rue de la Loi, Brussels.

THE FINSEN LIGHT TREATMENT AT THE LONDON HOSPITAL, 1900-1913.

BY J. H. SEQUEIRA, M.D. LOND., F.R.C.P. LOND., F.R.C.S. ENG.,

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THE Finsen light department at the London Hospital was opened on May 1st, 1900, with the lamp presented to the institution by Queen Alexandra, then Princess of Wales. The recent anniversary of this event has suggested a review of the results of the treatment during the past 13 years, and this, I venture to think, is of sufficient interest to place before the profession. In 1908 I published a review of the first seven years' work,[1] and the highly satisfactory character of the results then recorded has been fully maintained; we have in addition the longer experience of cases free from recurrence, and it is to this feature of the results that I wish to draw special attention. As before, I find that I have to divide my cases into several classes.

(*A*) Cases in which there has been no relapse after the completion of the treatment. These I propose to consider in two groups—those in which the treatment was completed more than three years ago and those in which the cure is more recent.

(*B*) Cases in which the disease disappeared under treatment, but which require occasional short attendances for small recurrences.

(*C*) Cases which have derived benefit from the treatment, but which have never been free from some evidence of the disease.

(*D*) Hopeless cases. In these the disease is of severe type and is uninfluenced materially by the light or, indeed, any form of treatment.

(*E*) Patients who for some reason, financial or other, have been unable to carry out the treatment or who have been lost sight of.

Class A.—Cases free from recurrence from 3 to 13 years, 544; recent "cures"—i.e., during the past three years, 186. The permanence of the results after the Finsen treatment is of special interest, and for this reason I have devoted particular attention to following up the cases. This has been a matter of considerable difficulty, but we are able to give the results in 544 cases. Of these no fewer than 302 old patients have been seen or have otherwise been communicated with during the past two months. I am greatly indebted to the sisters of the department who have been unremitting in their zeal in following up the old patients and keeping in touch with them. According to our information 99 patients have been free from recurrence for 10 years and upwards, 277 have been free from recurrence for between 5 and 10 years, and 168 for from 3 to 5 years.

Considerable attention has recently been manifested as to the possibility of the incidence of other forms of tuberculosis in lupus patients, and some authorities give a high percentage. I am not able to say how many of the cured patients are now suffering from tuberculosis of other organs, but I have records of six fatalities from pulmonary tuberculosis in the 23 deaths which have occurred in the 544 patients who left us free from lupus.

Deaths among the 544 Cured Cases.

Pulmonary tuberculosis (one with pneumothorax)	6
Internal cancer	2
Pneumonia	2
Diabetes	1
Peritonitis (not tubercular)	1
Perforation of appendix	1
Diphtheria	1
Septicæmia after childbirth	1
Puerperal eclampsia	1
Meningitis (apparently not tubercular)	1
Operation for gall-stones	1
Œsophageal cancer	1
General paralysis	1
Cause unknown	3
Total	23

[1] Seven Years' Experience of the Finsen Treatment, THE LANCET, March 7th, 1908, p. 713.

The 186 recent "cures" call for no comment. The disease has been entirely eradicated, and there appears no reason to anticipate recurrence.

Class B.—117 patients are placed in this group. In a number of instances they have been free from recurrences for a year or more, while others have to come up at intervals of a few months for further treatment. In some cases recurrences of small dimensions are constantly appearing, and it is impossible to look upon the patients as cured. The majority of these patients are able to follow their employment. As a rule, they respond very readily to treatment, and after a few sittings are able to resume their work.

Class C.—In this group I place the patients who have benefited by the treatment, but they have not been free from some evidence of the disease. In many cases the nasal cavity is extensively diseased, and in others the lupus of the skin is so extensive and so widespread that it is impossible to eradicate it. There are 161 of these patients. Some of them have been in attendance at intervals for years, and they will probably require more or less attention all their lives. Glandular and other forms of tuberculosis are more common in this type of case. They are the patients classed at the Copenhagen Institute as "Unsere Invaliden."

Class D.—Hopeless cases. There are 31 patients whom we have to look upon as being uninfluenced by the light treatment. In nearly all of them other measures have also proved of no assistance. In spite of all our efforts the lupus remains active and even extends. In part this appears to be due to the poor condition of the subjects, but there is some reason to believe that the particular strain of the tubercle bacillus is responsible. Upon this point it is hoped that researches now in progress will throw some light.

Class E.—Uncompleted cases. During the 13 years under review 127 patients have ceased attending or have been lost sight of. In the majority of instances financial or domestic reasons were given as the cause of the treatment being given up, while in a few the general health of the patient has prevented the treatment being continued.

Under treatment.—190 patients were under treatment or suspended for observation on May 1st, 1913.

Deaths occurring before treatment has been completed.—In addition to the 23 deaths occurring in the patients who have been known to be free from lupus for more than three years I have to record the following:—

Deaths from pulmonary tuberculosis	7
,, epithelioma on lupus	5
,, morbus cordis	5
,, tubercular meningitis	2
,, uterine disease	1
,, internal cancer	1
,, pneumonia	1
,, "fits"	1
,, railway accident	1
,, cause unknown	7
Total	31

Summarising the groups we have the following figures:—

Cures from 3 to 13 years	544
Cures of less than 3 years	186
Requiring occasional treatment	117
Improved	161
Uninfluenced	31
	1039
Treatment given up and untraced	127
Under treatment or observation	190
	1356

In addition to these cases of lupus vulgaris 94 cases of lupus erythematosus have been treated at different times by the Finsen light, and also 13 cases of rodent ulcer. Forty-eight cases of other affections, including leucodermia, alopecia areata, nævus, &c., have been submitted to the light.

In conclusion, it is only right to put on record the fact that the whole of the benefits here recorded in the cases of lupus vulgaris must not be ascribed to the Finsen treatment alone, although the major portion of the results are due to it. In certain cases of the ulcerative type we have availed ourselves of the X rays as a preliminary to the application of the light, and we have also used the rays in many cases of lupus of the mucous cavities. We have also had the benefit of the surgical assistance of Mr. Hunter F. Tod and Dr. H.

Lambert Lack in the treatment of intranasal disease, and of Mr. A. B. Roxburgh and Mr. W. T. Lister in the cases in which the lacrymal sac and lids were involved. In the nasal cases also we have made use of the Pfannenstill method; this, it will be remembered, consists in the administration of sodium iodide internally, while the affected cavities are packed with tampons soaked in peroxide of hydrogen solution. The development of free iodine in the cavities has given admirable results in certain cases.

The factor which above all has contributed to the success of the treatment is the devotion of the sisters and nurses in charge of the patients, not only in their carrying out the somewhat exacting details of the technique, but in their kindly encouragement and education of the patients themselves. I cannot speak too highly of their work in this connexion.

Lastly, I must acknowledge my indebtedness to the numerous clinical assistants who have worked in the department, and to the house committee of the London Hospital, who have at all times most generously granted me whatever was necessary for carrying out the work.

Manchester-square, W.

BREAST FEEDING:

THE CONSUMPTION OF BREAST MILK.

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COMPARED with the great strides that have been taken in the last half century in artificial methods of feeding not a great deal has been done to extend our control over nature's method. Even the quantity of human milk needed by an infant is still uncertain, though the opinion is sometimes heard that the whole matter can safely be left to nature—an attitude hardly to be found in other spheres of scientific inquiry. Certain it is that nature often conducts the business only indifferently well and sometimes very badly; yet on these occasions what trustworthy remedy is available? With no means of increasing or modifying the natural supply, bottle-feeding is the first and only resource when an infant fails to thrive on breast-milk.

What little is accurately known of the subject is largely drawn from a comparatively few observations on the consumption of breast-milk. Most of these, however, are merely estimates of the size of single feeds—the so-called "test meals"—and the daily total is calculated (with what accuracy will be considered later) by multiplying the size of the test meal by the number of the daily feeds. In only a few cases have the observations been continued over any length of time, the most systematic attempt on this larger scale having been made, in 1911, by Pritchard, Carter, and Pitt,[1] who estimated all the feeds of a number of babies in St. Marylebone Workhouse until the twenty-first day after birth; and their results stand as a guide to breast-feeding among the poorest classes. But, as they are careful to point out, their figures must not be taken as applicable to a better social class. Yet, so far as I am aware, no continuous observations on infants of this class have been made; no doubt the practical difficulties are considerable, since the experiment necessitates weighing a baby some score of times every day and at all hours of the day and night—an undertaking which not every mother would approve of.

In these circumstances, the following observations which I made four years ago would seem worth placing on record. They comprise a continuous estimate of the consumption of breast-milk by an infant of the better class from the fifth day after birth, when the supply of maternal milk began, until the forty-ninth day, when the child was removed from London. No other nourishment was given, and the mother had every advantage in the way of food, nursing, &c., which is customarily available for those whose circumstances are easy.

During the period of the experiment 413 breast feeds were given, the daily number varying from 7 to 11 and averaging 9. Immediately before each meal the infant was put in the scales, and again immediately after, except on a few occasions when, for one reason or another, no record was made. Altogether, in the seven weeks he was weighed 799 times. A special balance registering up to 20 kilos. and turning at 5 grm. was used, the records at first being in English, but subsequently in metric measure.

[1] See their paper (THE LANCET, 1911, vol. ii., p. 677) for such references as are to be found.

Results of Observations.

To begin with a summary of the results covering the whole period, the total consumption of milk from first to last was just under 24 litres (5 gall. 1 qrt.). If the composition of human milk be taken as 12·7 parts solid per centum, these 24 litres will have contained 3·048 kilos. (6 lb. 11 oz.) of sugar, fat, protein, and salts; and, on the foundation of this nourishment (plus oxygen, of course), the child built up an additional body-weight of 1·025 kilos. (2 lb. 4 oz.)—i.e., from 3·685 kilos. (8 lb. 2 oz.) to 4·710 kilos. (10 lb. 6 oz.).

The amount of milk consumed week by week is set out in the following table, the last column showing the daily average in each week.

TABLE I.—*Weekly Consumption of Milk.*

	Total milk.	Daily average.
Week 1*	750 c.c. (26½ oz.)	250 c.c. (9 oz.)
,, 2	3620 c.c. (128 oz.)	517 c.c. (18 oz.)
,, 3	3025 c.c. (106 oz.)	461 c.c. (16 oz.)
,, 4	3290 c.c. (116 oz.)	470 c.c. (16½ oz.)
,, 5	4305 c.c. (152 oz.)	615 c.c. (22 oz.)
,, 6	4215 c.c. (149 oz.)	602 c.c. (21 oz.)
,, 7	4595 c.c. (162 oz.)	685 c.c. (23 oz.)

* 3 days only.

With regard to these averages it is necessary to add that the actual daily consumption by no means always lay near the average, the difference between the largest and smallest daily totals in any given week varying considerably. Thus, in the second week this variation was from 380 c.c. (13½ oz.) to 600 c.c. (21 oz.), and in the third week from 420 c.c. (15½ oz.) to 495 c.c. (17½ oz.). In the next week it reached its maximum—a difference of 60 per cent.—as the following figures show.

TABLE II.—*Daily Breast Milk in Fourth Week.*

Day 22...	385 c.c. (13½ oz.)	Day 26...	570 c.c. (20 oz.)
,, 23...	355 c.c. (12½ oz.)	,, 27...	525 c.c. (18½ oz.
,, 24...	540 c.c. (19 oz.)	,, 28...	480 c.c. (17 oz.
,, 25...	425 c.c. (15 oz.)		

In each of the fourth and fifth weeks, however, the days were practically alike, not a 5 per cent. difference between them, but in the final week again they ranged from 640 c.c. (22½ oz.) to 730 c.c. (26 oz.)—a difference of 13 per cent. It will be observed, however, from the annexed chart that, in spite of these differences, the body-weight pursued its steady rise.

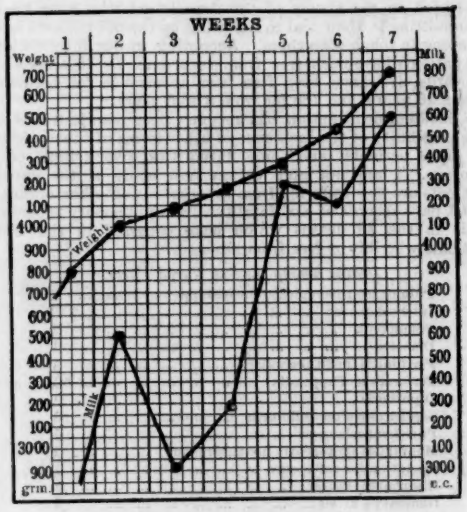

Chart showing body-weight and consumption of milk from the fifth to the forty-ninth day.

To pass next to the individual feeds, the average size of these in each week was as follows:—

TABLE III.—*Average Size of Feed.*

Week 1	28 c.c. (1 oz.)	Week 5	66 c.c. (2¼ oz.)
,, 2	57 c.c. (2 oz.)	,, 6	65 c.c. (2¼ oz.)
,, 3	46 c.c. (1½ oz.)	,, 7	77 c.c. (2½ oz.)
,, 4	46 c.c. (1½ oz.)		

But here, again, the actual feeds varied very widely, and this although both breasts were never given at one time. The largest and smallest meals in each week are recorded in the next table.

TABLE IV.

	Largest feed.	Smallest feed.
Week 1	55 c.c. (2 oz.)	7 c.c. (¼ oz.)
,, 2	125 c.c. (4½ oz.)	7 c.c. (¼ oz.)
,, 3	125 c.c. (4½ oz.)	7 c.c. (¼ oz.)
,, 4	100 c.c. (3½ oz.)	15 c.c. (½ oz.)
,, 5	100 c.c. (3½ oz.)	30 c.c. (1 oz.)
,, 6	110 c.c. (4 oz.)	40 c.c. (1½ oz.)
,, 7	185 c.c. (6½ oz.)	35 c.c. (1¼ oz.)

So large a feed in the second week as 125 c.c. was unexpected, but it was registered twice in that week—once on the tenth day and again on the thirteenth—while on the eleventh a feed, nearly as large, of 110 c.c. (4 oz.) was taken. Similarly, in the third week a feed of 125 c.c. was taken on the eighteenth day and one of 110 c.c. on the twentieth. These figures are suggestive when contrasted with the reputed capacity of an infant's stomach; thus it is commonly held that the size of a bottle-feed in the second week should not exceed 50 c.c. (1¾ oz.) and in the third week 55 c.c. (2 oz.). And yet, in the case under observation, 29 of the 66 second-week feeds were 2 oz. and over (12 of them being 3 oz. and over), and 19 of the 72 third-week feeds were 2½ oz. and over (7 being 3½ oz. and over).

Another interesting fact is brought out by the experiment. The same breast, after approximately equal periods of rest, yielded very unequal quantities of secretion; indeed, this was the rule rather than the exception. To give two instances from among many. On the thirty-second day the same breast was given at 2.45 A.M., 8 A.M., 12.30 P.M., 5.30 P.M., and 10 P.M.—after intervals of 4, 5¼, 4½, 5, and 4½ hours—but the subsequent feeds were 55 c.c. (2 oz.), 30 c.c. (1 oz.), 85 c.c. (3 oz.), 100 c.c. (3½ oz.), and 55 c.c. (2 oz.). Again, on the forty-third day, one breast was given at 3 A.M., 8 A.M., 12.30 P.M., 4.45 P.M., and 8.30 P.M.—the intervals being 4, 5, 4½, 4¼, and 3¾ hours—and yet the feeds were 60 c.c. (2 oz.), 85 c.c. (3 oz.), 145 c.c. (5 oz.), 40 c.c. (1½ oz.), and 55 c.c. (2 oz.). For all this, however, it was generally found that, roughly, one half the daily milk came from each breast. Nevertheless, on some days again, one gland would be more than twice as active as the other—on the fifteenth day, for example, the separate totals were 285 c.c. (10 oz.) and 135 c.c. (4¾ oz.).

Variability in Consumption of Milk.

Perhaps the most notable feature of these observations is the variability in the consumption of milk. How to account for it is not easy. No diurnal cycle of activity of the mammary glands could be traced, the biggest and smallest feeds occurring at any hour of the day or night—a fact which also excludes such periodic maternal influences as meals, sleep, and fatigue. On the other hand, it is no easier to place the responsibility on the child, though it might be suggested that, being hungrier at one time than another, he was able, by the vigour of his sucking, to regulate the supply according to his needs. In favour of this it was noticed that a contented sigh of repletion was no less frequent after a light meal than after a heavy—i.e., that the small feeds were all that was wanted at the time—and he was practically always stuporose from his draught of milk when put in the scale-pan again. Against it, however, is the fact that a full meal took no longer than a scanty, which seems to show that at one time the supply was more abundant than at another. Moreover, he occasionally showed temper soon after being placed at the breast, grunting and biting the nipple viciously, from which it might be inferred that at these times he found his cupboard barer than he liked; unfortunately, no notes were made on the relation between this show of dissatisfaction and the size of the subsequent feed.

On the whole, my impression is that the secretion, though becoming ampler with the growth of the child, and to this extent, therefore, being regulated by the demand, varied from day to day and from hour to hour under the influence of maternal factors. But what these factors were I did not discover, nor how to control them; and this, I am inclined to think, is probably the experience of most who have attempted to regulate the secretion of milk by dieting the mother. Whether she is fed generously or moderately, drinks much milk or little, takes or abstains from oatmeal stout and other reputed galactagogues, no reasonably scientific proof is yet forthcoming that these measures affect the activity of the mammary glands. It is probable, however, that if the observations here recorded were supplemented by others, light would gradually be thrown on this practically important but scientifically neglected aspect of physiology.

Just one point more. What is the value of a single test meal as an index of the total daily consumption? In the present case only a small minority of the feeds were of the average size as calculated at the end of the day; in other words, any of the majority of them, if accepted as a test meal, would, on being multiplied up, have shown too high or too low a daily average, and a large number of them would have given altogether misleading results. To take a day at random—the thirty-eighth. The 10 A.M. feed was 40 c.c. (1⅓ oz.), which, multiplied by nine, the number of the feeds on that day, gives the day's total as 360 c.c. (13½ oz.); the 5 P.M. feed, however, was 85 c.c. (3 oz.), giving the total as 765 c.c. (27 oz.). In point of fact, the actual consumption was 575 c.c. (20 oz.). If this example is illustrative of other cases, so frequent a liability to an error so considerable must rob the test meal of its practical value. I think that the observations, to be trustworthy, must be continued for at least 24 hours on end, and ought to cover several days together.

Wimpole-street, W.

BREAST FEEDING:

ITS MANAGEMENT AND MISMANAGEMENT.

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WEANING at or shortly after birth is, I need hardly say, very common among the well-to-do classes, and there are signs that the custom is spreading gradually to the less well-to-do. There is a tendency amongst medical men and others to accept this as an inevitable outcome of modern life and to oppose it merely with a few generalisations and platitudes. The historical evidence of Dr. David Forsyth and the clinical evidence of Dr. Eric Pritchard and Dr. H. R. Carter certainly seem to point in the direction of women's lessened capacity for nursing, but I think that the subject has never been thoroughly investigated, and one reason for this seems to me to be that the "baby expert" does not usually arrive on the scene until some weeks after birth. Without making any dogmatic assertion that all this modern increase of weaning is unnecessary, I hope to be able to raise in your minds the doubt whether a considerable amount of this leakage from natural to artificial feeding is not avoidable and due to mismanagement at birth. Some of the details may seem trivial enough, but my subjective experience—for I have nursed six babies of my own—leads me to believe that neglect of such details will have a profound effect upon the after-course of the feeding. I believe that few medical men appreciate the difficulties attendant on the commencement of lactation, and that a mother without the intelligent and sympathetic help which comes from such appreciation often lapses into a course of feeding which would otherwise be avoidable. Forewarned is forearmed, and if the mother understands that certain things, which appear to her in her weak and aching condition to be unusual and unnatural, are really common and natural, her mind will be set at rest and she will not try to remedy that which requires no remedy.

[1] A paper read before the annual meeting of the Association of Infant Consultation and Schools for Mothers at the Horticultural Hall, Vincent-square, Westminster, on April 25th, 1913.

The mother's state during the first two days.—At this period she feels weak and aching all over, and a prime necessity for her is sufficient rest and sleep. But this it is very often difficult for her to get. It is not always possible for a housekeeper to relinquish entirely the reins of office, and the nurse, if strange, is unable to shield her from the daily cares. It is at this period that the baby so often cries both long and loud, and has no sense of the division of night from day.

It will be trite to you that the milk flow is not established for the first two or three days, but in my experience few mothers understand that the crying of a baby at this time is not a cry of hunger, but a natural process for the full expansion of the lungs. The consequence of all this is that the mother gets worked up into a feverish state of anxiety, and when an opportunity for sleep comes she is unable to take advantage of it. The probable effect of this state on the function of the mammary gland may be easily imagined. A vicious circle is easily set up, in which the mother's nervous state acts prejudicially to the milk, and anxiety from the poor milk supply keeps up the nervous condition.

The baby's difficulty in sucking.—It is a rather curious and unexpected phenomenon that, apart from the condition known as depressed nipples, a baby should show any aversion to taking its natural sustenance. It is, nevertheless, a fact that many babies will struggle and scream for long periods before they will suck effectively, and will often repeat this performance again and again as their meal-times come round. Among the poor it is quite common to find mothers who feed from one breast only, and this upon careful inquiry is found to be due in many cases, not to an abscess having developed on one side, but merely to the predilection of the infant. My own personal experience bears out, not only the infantile aversion to sucking, but that the aversion is sometimes noticeably unilateral.

The usual position for the nurse to place the baby for its meal is lying parallel to and at one side of the mother. Now with this arrangement the mother has to turn sideways and support herself in an uncomfortable position, in which she gets tired within a few minutes. Even when the baby takes with readiness she feels cramped and tired before the end of the meal, but when the baby struggles and refuses she is exhausted before any proper attempt at sucking has been made. The baby should be laid across the mother's body and a pillow placed under the arm that supports the child's head. The finger placed in the baby's mouth acts as a stimulus to sucking, and by rapidly withdrawing it and substituting the nipple the opposition of the child may with patience be overcome.

Cracked nipples.—The pain caused by these minute fissures is frequently intense, and acts as a most powerful deterrent to lactation. A short time ago a friend told me that it was only the experience of what she had gone through with her first baby, which was bottle-fed and a waster, which enabled her to endure the agony with her second child. It is not my intention to plunge deeply into treatment, but I may say that the avoidance of the hardening agents that are so often recommended, the strict limitation of the time of sucking during the first two or three days, and the application of bland ointments and fomentations are, to my mind, the things of most importance for the alleviation of this condition.

The after-pains brought on by the baby sucking during the first two or three days are sometimes intense and sufficient to make the mother feel quite faint. I have known mothers quite worried over this, thinking there was something wrong. An assurance that this pain is really beneficial in helping the organs to regain their normal size again is a great comfort and removes one more hindrance to lactation.

After about 60 hours the breasts begin to be hard and very tender; it hurts the mother to move her arms or to turn over; she feels uncomfortable; the temperature may rise slightly, and the pain may even keep her awake. It is at this time that the stimulus of sucking causes what is known as the "draught" to appear. This is a sharp cutting pain radiating through both breasts. It occurs about a quarter of a minute after the breast is stimulated, and the earlier the lactation period the earlier it comes on. If now the infant brings up the draught by mouthing the nipple without firmly catching hold, the breast soon gets soft again, and this is often mistaken by the mother and the nurse for an indication of a poor supply of milk. A mother should be informed beforehand that the breast only secretes whilst the sucking action is going on, and that if that stimulus is not present the gland will become softer.

Periodic feeding.—Some people have scoffed at the careful arrangement of hours for feeding, saying that it is an artificial interference with the natural proclivities of the infant; but the secretion of the breast certainly tends to be periodic. During the first few months the draught comes into the breast at regular periods, and if the baby is not there to suck the milk runs away. I think there can be little doubt that it is best to let the baby have its meal at what is evidently the optimum time of secretory activity, and this is borne out by the observation that if the baby sleeps over the time when the draught comes he is usually more disturbed and fretful after his meal. It is a common thing to hear mothers say that the milk goes when they come downstairs, and I have some reason to think that the cause of this is partially at any rate the deficiency of regular periodic stimulation during the lying-in period. Babies do seem to sleep most soundly during the first month, and there is often great difficulty in rousing them for their feed. A quick way is to wash the face with water that is almost cold.

Rapidity of flow.—The milk flows from the breast very quickly during the first two or three minutes; it comes out in several strong jets at this time, while during the latter part of the sucking period the flow is very slow. This may be demonstrated in more than one way. If while the baby is sucking at one side a breast pump be applied to the opposite side, the whole process may be watched and this rapid squirting out for the first minute or two be seen. It may also be demonstrated by means of the test feed that if, say, the usual period of sucking is ten minutes, in the first three minutes the baby will receive something like two-thirds the total amount of its average meal. I have known a baby weighing less than 11 lb. to take more than 3 oz. in just over three minutes.

This vigorous flow may irritate the back of the child's throat and cause it to choke, so that it begins to scream and refuses to suck. The mother may imagine that the milk does not suit the child, and finding that the choking and screaming do not occur with the bottle she may be strengthened in her erroneous conclusion. She should, of course, be told of the possibility of this occurrence, and that the symptoms are of no serious import.

As the milk flows out so rapidly at first it may be heard gurgling into the stomach. I have known a mother who, hearing this, thought that something was seriously wrong, and it was once quoted to me as a cause of weaning.

The crying of the baby is often taken as an indication of deficient supply of milk. The simplest way of investigating this is to give the child a test feed by weighing it before and after a meal on sensitive scales. Such scales are often, however, not available, but a fairly accurate estimate may be made by using the pump to the opposite breast while the baby is sucking; the amount obtained is rather less than what the baby gets. The indiarubber ball of the pump should be held squeezed tight until the mother feels the draught and then released, when the milk will flow out and fill the reservoir without further pumping. Nurses frequently use the pump in an entirely wrong manner by applying it to a breast while the baby is not sucking nor due to suck. It is easy to demonstrate that by this means the flow often appears to be quite inadequate, when in reality it is nothing of the kind. The mother, of course, is much impressed when she sees the flow into the pump is so small, and needs very little further persuading that her milk is of little use to the baby.

Returning to the question of crying as an indication of the quantity of the supply, I have carried out a series of test feeds on one baby during the first month of life, testing almost every meal during this period; and was unable to find any relationship between the amount taken and the amount of crying between the feeds.

Nervous phenomena.—The process of suckling a child is associated with distinct nervous phenomena. This is probably due to the stimulation of a little used gland at a time when the general tone is lowered owing to the pain and shock of childbirth. Insanity has, you know, a tendency to appear at such times, and the lesser grades of insanity merge gradually into what may be considered as a normal, or at any rate a very usual condition—namely, hyperexcitability and liability to be upset by very trivial causes. A headache which comes on with greater intensity

when the mother tries to go to sleep, and which effectually prevents sleep, is quite common. It is often easily controlled by some phenacetin and caffeine, and it is the duty of the nurse so to arrange the work of the sick-room and the baby's outings that the mother can have undisturbed quiet from, say, 2 to 4 P.M. Such rest, in my opinion, is most essential, and should be insisted upon by the medical attendant. Bromides at night will enable the mother to get to sleep again quickly if she is aroused to feed the baby. When lactation is firmly established bromide is no longer required, for the mother then usually feels very sleepy, and will, as the Irishman said, "wake up to find herself asleep." The phenacetin, however, often needs to be continued for a month or six weeks, as the day headache not infrequently persists for this length of time.

The length of time that a mother should stay in bed is a matter on which there is some divergence of opinion. There is a school of obstetric physicians now who recommend their patients to rise almost immediately after parturition. They may be (and probably are) quite right that the absolutely recumbent position is not the best for the woman's internal organs, but it seems to me that they leave out of count the circumstances attendant on early rising from bed. The mother willy-nilly gets plunged into the whirl of her household duties as soon as she is actually found to be up. If then she is suffering, as is only too likely, from some nervous instability, something is bound to suffer, and it is quite likely that this will be the milk-supply. I am convinced that a large number of weanings take place because the mother is not sufficiently shielded from worries during these very important few weeks immediately after birth. The more careful and apt to act with foresight the mother is the more likely she is to be affected, and this is perhaps the reason why the poor, who are generally more haphazard and leave things more to chance, do not seem to suffer so much. By all means get rid of the totally recumbent posture and let the mother sit up in bed, but have her treated as an invalid both as regards callers and affairs of management. After the mother does get up I think it is a good plan for her to lie down while feeding the child for the first month or two. This ensures a quarter of an hour's rest every two or three hours.

You may think that I am exaggerating in describing these nervous conditions, but how many babies are weaned because the medical man says that Mrs. So-and-So is not equal to the strain, and in how many of these cases is a moment's consideration given as to whether something else may not be sacrificed rather than the natural food of the child. I am sure that a lot of weanings take place, not because the mother is definitely unwilling to feed, but because she thinks that she can combine the feeding with a lot of social duties and pleasures; in other words, that she has never counted the cost. I heard of a case the other day where the mother had determined to start that insidious "one bottle a day" in order to be able to go out to dinner and theatre, and was inquiring as to what to put into it. Fortunately the medical man pointed out the likelihood of *one* leading to *more*, and a week or two later the mother, having thought it all out, had come to the conclusion that the sacrifice of a few pleasures was a small price to pay for not only ensuring a good basis of health for her child, but giving herself that intimate interest in the child's welfare which can only be gained through sacrifice.

Fissures of the anus are a very common condition after childbirth, and excruciatingly painful, and yet the medical man is hardly ever informed of this pain. So much may be done for its prevention and alleviation, yet because the mother looks worn out and this cause is not suspected weaning may be ordered.

Both from my own experience and from inquiries I have made among a number of nursing mothers I have come to the conclusion that there are certain periods when the milk tends to fail and when it is particularly easy for weaning to take place. These danger times are the ninth day, the third week, the sixth week, and the beginnings of the third and fourth months. It is easier to concentrate one's attention on certain particular times than to exercise constant vigilance, and therefore it is important to remember that it is at these periods that exercise, fresh air, sleep, &c., should be particularly insisted upon. The value of fresh air and walking exercise cannot, in my opinion, be exaggerated; overfeeding and taking large quantities of milk are too much practised.

I cannot leave this subject without alluding to what I believe is a very common, if not the commonest, cause of unnecessary weaning among the poor—namely, thrush. It commonly causes vomiting, loose motions, and loss of weight; and it is not at all surprising that such symptoms are taken as an indication that the breast milk is not agreeing with the baby. As the condition is a totally preventable one, it is the more a pity that it should be the starting-point of so much trouble.

I have not attempted an exhaustive account of maternal pitfalls; in fact, I have deliberately omitted some, such as the seductive castor oil, which have been ably treated of by well-known authorities. I have wished to confine my remarks to those points about which I have read little or nothing.

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BREAST FEEDING:

DR. VARIOT'S TEACHING.

BY DISNEY H. D. CRAN, M.B., CH.B. EDIN.,
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"*Let the child on the breast drink according to its appetite.*" This has for many years been the teaching of Dr. Variot, of Paris, médecin en chef de l'Hospice des Enfants-Assistés, who strongly protests against the methods at present taught and practised in the maternities of France.

For the past 15 years the obstetricians here have been regulating as severely the amount of milk taken by the child on the breast as by the child artificially fed. They have formulated strict rules not only for the number of times the breast is to be given in 24 hours, but also for fixing definitely the quantity of milk to be ingested at each meal. The fear of overfeeding has induced them to use the weighing machine in all cases, whether the mother have abundant lactation or not, and whether the child be normal or weakly. The attendant in labour advises the mother to weigh her child each time before and after giving it the breast, in order that the prescribed quantity of milk to be given be not exceeded. Many a young mother worries if her child has taken 10 or 15 grm. more than she was told to give it, whilst another grieves because the figure demanded cannot be attained. And so the weighing machine becomes an instrument of torture as much to the mother with plenty of milk as to the one whose lactation is poor.

The following are Dr. Variot's criticisms of this abuse of the weighing machine in the control of the feeding of infants by the breast. He points out that the harm done by these strict regulations would not be nearly so great if at least the quantities fixed corresponded to those which have been scientifically determined as convenient for the nursling, and which naturally vary with its age, state of nutrition, &c. But a fundamental error has been committed in the estimation of this ration, and its consequences have in practice been extremely unfortunate. During these past few years a large number of infants, brought up according to the erroneous precepts of the young medical men and midwives, have presented various disorders directly due to what Dr. Variot has called "hypoalimentation." It must be admitted they have suffered from hunger.

Origin of the Error.

It is easy to trace this error to its source, which rests in the rules formulated by Budin to be observed in the feeding of infants by the breast. In his "Manuel d'Accouchement et d'Allaitement" he describes the signs and symptoms induced by overfeeding, and goes on to say:—

> If the weighing machine should indicate that the child is taking too much, for sometimes in two or three minutes 140 or 150 grm. of milk may be ingested, then the length of time it is left on the breast must be diminished, and it may be allowed to drink for 5, 4, 3, and sometimes even only for 2 minutes. Soon the diarrhœa, vomiting, &c., due to overfeeding will disappear, and the child will begin to gain weight.

But it is more particularly in connexion with artificial feeding that Budin promulgated his doctrine of "suralimentation," for in the same work he says:—

> For children of 5 or 6 months, or rather for children weighing 6-7 kilos., we give about 100 grm. per kilo. of their weight of pure sterilised milk in 24 hours, and our results are good. There is always a tendency to overfeeding; if a child is not receiving a sufficient quantity of milk it may cease to put on weight, may even lose weight, but will not have disorders of digestion. We prefer, therefore, to underfeed the child for several days—even for a week or two—rather than give it too much.

Maurel, of Toulouse, has, by calorimetric studies, endeavoured to give this rule a scientific precision. He

says: "Thanks to my works and those of Budin I can see the law of '100 grm. of milk per kilo. of child in 24 hours,' which has the advantage of being easy to remember, spreading far and wide."

It is only too true that this false precept, in virtue of its simplicity, has been taught and is still retained in the maternities. But the modifications which these authors at a later period applied to the aphorism of 100 grm. per kilo. have not been similarly propagated as they should.

Budin had quite definitely distinguished the ration of maintenance necessary for the general nutritive processes of the child from that of growth which is necessary for plastic development and for the increase in weight of the child. He realised that the latter was small in comparison with the former. Thus, for an infant of 2 months who is being fed on the breast the ration of maintenance will be 600 grm., whilst the addition necessary for growth will be barely 80 to 100 grm. Budin has always kept too near the quantity necessary for simple maintenance; he recommends feeling about, as though even a small excess of milk might be dangerous and as though its content in fixed principles never varied.

That Dr. Variot considers to be the fundamental error, which has been further amplified by the numerous disciples in France of the celebrated obstetrician.

"*The ration of milk for the normal new-born is 1/6th of its weight and not 1/10th.*"—The energy value of human milk being nearly as great as that of cow's milk (700 calories to a litre of human milk, as against 760 to a litre of cow's milk), the "Budinists" have applied these principles proposed by their master for artificial feeding to feeding by the breast. The ration of 100 grm. of milk per kilo. of weight in 24 hours (i.e., 1/10th of weight) is barely sufficient for maintenance, and by calorimetric studies conducted in Dr. Variot's chemical laboratory by M. Lavialle it has been shown that this quantity of milk does not even equal the number of calories given off by certain children. The daily ration of mother's milk necessary for normal growth must be about 1/6th of the weight of the body. After three months the quantity of milk often falls to 1/7th of the weight in the 24 hours.

The simple formula of 100 grm. per kilo. has made many victims amongst the breast-fed babies of France. These have presented various disorders directly due to underfeeding. And this evil has been aggravated because these symptoms have been misunderstood and attributed to overfeeding.

Symptoms of Hypoalimentation.

The child is nervous and agitated; it cries day and night. When put on the breast it drinks greedily and begins to cry as soon as it is taken off. Its little hand is constantly held in its mouth. The child is thin, and numerous wrinkles on the forehead are characteristic. As Dr. Variot puts it, "the child is truly dehydrated." But the gastro-intestinal symptoms are those which have misled the followers of Budin. When a child on the breast vomits it is put down at once to overfeeding—not even the possibility of a toxic milk is considered.

Vomiting is one of the commonest indications of hypoalimentation. At first it is a simple regurgitation, but this is followed by true vomiting, the child bringing up immediately, or a quarter or half an hour after drinking, a part or the whole of the milk ingested. With these gastric disorders are usually associated intestinal troubles. After a period of false constipation follows one of diarrhœa. There may be 3, 4, or 6 stools per day, usually brownish at first, but later greenish, tinted with bile, and rather scanty each time.

In presence of this confusing contrast of intolerance for food and evidence of hunger, Dr. Variot used to conclude that the condition was due to a toxicity of the mother's milk. But it is many years since he has realised that all these symptoms are directly due to hypoalimentation, and that they disappear when the child receives the proper quantity of food. The rapid increase in the weight of the child when it receives the appropriate ration is the surest indication that it has been underfed.

Typical case.—An infant of 2 months, fed by the breast of the mother, had gained no weight since birth. The stools were numerous and greenish, and vomiting coming on regularly a few minutes after each meal it was feared that the mother's milk was toxic. The child weighed only 3 kilos. 500 grm. (about 7½ lb.). It was ascertained that the mother had been advised to ration strictly the quantity of milk taken. The infant received about 350 grm. in 24 hours—being weighed before and after each meal; when it had taken about 60 grm. it was removed from the breast, even though it continued to cry. The mother was advised to give her child 600 to 700 grm. per day. Almost immediately the vomiting ceased, the stools became normal, and the child gained about 30 or 40 grm. per day.

The practitioners and midwives in France, always dominated by the fear of overfeeding, rarely fail to advise mothers and wet-nurses to offer only one breast to the child at each meal. This is one of the commonest conditions which determine the onset of the symptoms of hypoalimentation. Such advice may, indeed, be quite useful during the first few weeks of life when the gastric capacity of the infant is very small (25–30 grm.); or again, it may be useful in some few cases where the lactation of the mother or wet-nurse is very abundant. But employed as a general rule, applied to all cases and continued after the first two months of life, it will often prove fatal. Also, if one breast alone be given, and the same breast at each meal, this will have as its consequence a more or less rapid diminution in the secretion of milk in the other breast, which is now no longer stimulated to activity by the sucking of the child.

Statistics.

Each year about 2000 new-born children are abandoned by their parents to public charity, and received in the Hospice des Enfants-Assistés. Daily convoys of wet-nurses come from the various districts round Paris to take these little unfortunates to their homes in the country. These women are ignorant of the most elementary principles of infantile hygiene, or, Dr. Variot has called it, "puericulture." One can safely say that these country mothers normally overfeed their own children, for they usually have a lot of milk and give the breast to the child day and night whenever it cries. On making a searching inquiry into the mortality in the first year it has been found that amongst these children it does not exceed 4·5 per cent. The following are the figures for 1912:—

Wet-nurses	1256	Deaths from 0–1 year	118
Children	3748	Infantile mortality	3·14%

Further observations in the same direction have been made in the nursery of the Hospice des Enfants-Assistés, where 15 resident wet-nurses give the breast to those abandoned children too weakly to be sent away to the country. Here each nursling is given the breast six times during the day and twice during the night; it is usually given both breasts, and is allowed to drink according to its thirst. And yet, although these children have thus in a way as much milk as they wish, digestive disorders and interference with normal development are very rare. Nor with the weaklings, who in proportion to their weight require a big ration of milk for growth and to satisfy their calorific needs, has any evil resulted from allowing them to have as much as they wish.

By weighing the amount of milk taken by the infants who are fed by the resident wet-nurses it has been found that there are marked variations in the quantity of milk taken at each meal. It may vary from one-sixth to one-half of the body weight in 24 hours. Also the amount taken on different days may vary by as much as 100 grm.

Conclusions.

All this goes to prove that the serious accidents so commonly attributed to overfeeding by the breast must be very exceptional. If the child has taken a little too much milk there is a simple regurgitation, which occurs at that moment after the meal when the stomach contracts and expels the air swallowed with the milk. The stomach of the baby is not a rigid receptacle; its musculature is extensible and its glandular mechanism is quite able to chymify a fairly large quantity of the mother's milk.

This does not mean that the weighing machine is never of any use in the control of feeding by the breast. But when a young mother is healthy and has a regular secretion of good milk, and when her baby is likewise normal and drinks well, it is quite useless to weigh before and after each meal. In these circumstances it is sufficient to weigh the child once or twice a week. On the other hand, the methodic use of the weighing machine is indicated as soon as a child on the breast ceases to increase in weight. This will usually show that the secretion of milk is diminishing.

The milk of the mother must be administered as an aliment and not measured as a medicine.

Paris.

A CASE HAVING A BEARING ON THE LOCALISATION OF THE AUDITORY CENTRE.

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AND
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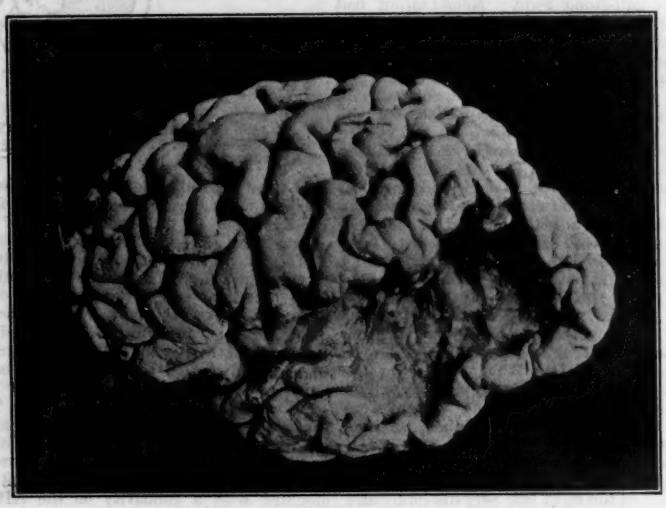
THE centre for hearing is usually considered to lie in the anterior portion of the first and second temporal convolutions. Campbell, however, in his recent work on the localisation of cerebral function, has pointed out the great importance from the auditory standpoint of the gyri of Heschl. These are several small parallel gyri which are situated on the upper surface of the superior temporal convolution, that surface, namely, which is concealed within the fissure of Sylvius, and which looks towards the island of Reil. In these gyri, and especially in the anterior gyrus, there is a remarkable wealth of association fibres and of large pyramidal cells compared with any other part of the temporal lobe. The area defined on histological grounds by Campbell corresponds closely with that marked out by Flechsig on embryological lines.



From a photograph showing parts of the temporal lobe spared from destruction.

The importance of the present case lies in the fact that the destructive lesion might have been especially designed to isolate the gyri of Heschl, so completely did it destroy the other parts of the temporal lobe which are considered to have an auditory function. The hearing of the patient was perfect, nor was his intelligence impaired to any marked extent. Of course, this lesion was a unilateral one, and it is possible that the right side may have functioned to a certain extent. It is almost certain, however, that if the auditory centre on the left side had been seriously interfered with there would have been some marked impairment of the function of hearing, and especially of the understanding of spoken words. The case is as follows.

A man, aged 47, by trade a moulder, was admitted to the Lancashire County Asylum, Winwick, on Feb. 1st, 1902, having been transferred from another asylum where he had spent nearly two years, and was suffering from chronic mania. Examination of his nervous system revealed no evidence of the presence of any cerebral lesion, but there was marked arterio-sclerosis. The patient, who became a useful and capable worker in the institution, was weakminded and somewhat irrational in his conversation, but was able to understand all that was said to him. He was liable to periodic attacks of noisy excitement and at times became very abusive. His hearing was apparently perfect. An interesting feature of the case was that he suffered from auditory hallucinations. He died on April 6th, 1912, from myocardial degeneration.

At the post-mortem examination it was found that the greater part of the temporal lobe of the left cerebral hemisphere was replaced by a large cyst containing a clear colourless fluid. The destruction was of a most extensive character, involving the whole of the temporal lobe with the exception of the third and the anterior extremities of the second and first convolutions, the last named bearing the anterior gyrus of Heschl on its upper surface. The remainder of the brain was perfectly normal, but there was a considerable degree of arterio-sclerosis of the vessels at the base of the brain. Sections from various parts of the brain, including the gyri of Heschl, were examined, but no abnormalities were detected.

Cysts of the brain may be congenital in origin, or may be due to hydatids, degeneration of gliomata or sarcomata, or to cerebral softening consequent on vascular occlusion or hæmorrhagic extravasation into the brain substance. As this brain in all other respects was well developed, and no other organ of the body showed any evidence of congenital malformation, and as the patient was able to carry on his work as a moulder till over 40 years of age, it may be argued that this cystic formation started after the growth of the brain had taken place. The question of sarcoma, glioma, or hydatid can be discounted by a microscopical examination of the lining membrane, and we are left with the assumption that the cyst was of vascular origin, a view which is supported by the presence of arterial disease in the cerebral vessels.

The accompanying illustration, which shows the parts of the temporal lobe that were spared from destruction, will serve to indicate those parts of the lobe a unilateral destruction of which has apparently no effect on the function of hearing.

BRITISH HOSPITALS ASSOCIATION.—The programme has now been issued for the fourth annual conference of this association, already announced in these columns, to be held in Oxford from June 26th to 28th next. The President of the conference is Sir William Osler, Regius Professor of Medicine, and the meetings will be held in the Examination Schools, High-street, Oxford, by permission of the Vice-Chancellor of the University. An inquiry office will be open during the conference at Queen's College. On Thursday, June 26th, at 10 A.M., the presidential address will be delivered by Sir William Osler, and the morning session will be devoted to the consideration of the National Health Insurance Act and its effects upon the Hospitals, with a view to the proposed amendment of the Act. In the afternoon an address will be given by Sir Thomas Oliver on Tuberculosis and the General Hospitals, to be followed by discussion, and a visit will be paid to the Radcliffe Infirmary, where tea will be provided. On Friday morning Mr. Keith Young, F.R.I.B.A., will read a paper on the Upkeep of Hospitals, to be followed by discussion. Friday afternoon and Saturday will be devoted to visits to the colleges, &c., and to excursions to places of interest in the neighbourhood of Oxford, of which full particulars will be duly announced at the conference.

A CASE OF FULL-TERM LIVING CHILD REMOVED BY LAPAROTOMY IN AN EXTRA-UTERINE PREGNANCY.

BY NOEL L. HOOD, M.A., M.D., B.C. CANTAB.,
SURGEON TO THE YORK COUNTY HOSPITAL.

THE patient was 28 years of age. Her family history was good. She had had scarlet fever at 7 years of age, but had suffered from no other illnesses. Menstruation began at 17 years of age, lasting 3-4 days, 28-day type, perfectly regular. She had married in March, 1901. In February, 1902, after eight weeks' illness in bed, and only a history of "feeling generally ill," she was delivered, after an eight months pregnancy, of a dead child, "slightly mortified." She had never been really well since, being subject every three or four months to severe pains in the body, which she was told were from gall-stone colic. Menstruation had ceased on March 3rd, 1909, but there had been a slight show each month end in April and May. On May 12th, 1909, after an omnibus drive, the patient had severe vaginal hæmorrhage. She was taken home in a cab and was told by her medical attendant that probably a miscarriage was coming on. Nothing happened, but she was in bed for nine weeks. Early in June she had sudden violent abdominal pain, extreme faintness, and said she "felt as if something had burst and she was going to die." She had another similar attack in 14 days, and again, 14 days later, a third. Between the second and third attacks she was examined under an anæsthetic, and her medical advisers told me they felt what appeared to them to be a fibroid or hard ovarian tumour low down in the pelvis, and a pregnant uterus above. The patient improved and got up and about. On July 11th she first felt fœtal movements. She continued well till Nov. 20th, when every time she passed urine there was a discharge of blood from the vagina. This continued till her admission under my care to the York County Hospital on Dec. 22nd, 1909. On the night of Dec. 20th she began to have pains in the body, which got gradually worse next day and which she thought were labour pains. On Dec. 22nd, the pains continuing, she was sent by her medical attendants into the hospital.

On admission a large tumour corresponding to a full-term pregnancy could be felt in the abdomen. The head was felt below the costal margin on the right side very distinctly and a softish tumour was felt in the position of the normal uterus. Per vaginam the cervix uteri was found to be drawn very high up and could only just be reached; it was hard, not at all dilated, and projecting in the middle line. The patient said she was having labour pains and had felt the child move distinctly that morning.

An operation was performed the same evening. After the administration of a drachm and a half of ext. ergotæ liq. by mouth an incision was made in the middle line and the tumour was made to present. There were some slight adhesions to the anterior abdominal wall which had to be separated, and a thin layer of omentum required separation and was ligatured off before the tumour was made to present clearly. It was thin-walled, and the child's head and hair were visible through its transparent wall. It was incised and the incision dilated with the fingers, the child at once removed, and the cord ligatured. The child weighed 7½ lb., and with a little attention soon breathed well and naturally. The sac was between the layers of the right broad ligament, the placenta lying partly on its anterior wall and partly on the uterus, and extending towards Douglas's pouch. It showed no tendency at all to separate. The cord ran deeply down in the pelvis. At first the sac looked as if it might, at any rate partly, be easily separated. This was commenced by separating it from adhesions to the small gut on its upper aspect, which was easily accomplished, and a good deal of it freed, but further attempts soon led to severe hæmorrhage from thin-walled, much-dilated veins, especially between the uterus and the placenta. These were joined by a thick mass of vascular tissue, apparently extending right down into the pelvis. This tore with the greatest ease and bled profusely, and as the ligatures cut through at once two large clamps had to be left on, one on the uterine side and one on the placental. A portion of the placenta which had been more or less freed, about the size of half a normal spleen, was ligatured off with thick silk and removed. The sac was brought out as far as possible through the abdominal wound, with the cord enclosed in a split drainage tube in the middle of it. The peritoneum was sutured down to it and then stitched to the sac wall, and the clamps were left on projecting from the lower part of the wound. The skin and muscles were united with salmon gut sutures. The clamps were removed after 36 hours without any hæmorrhage. The child passed urine as it was being lifted out,

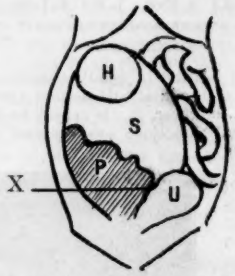


Diagram showing position of sac, &c. H, Child's head. S, Sac. P, Placenta. U, Uterus. X, Site of easy tearing and severe hæmorrhage.

and some certainly reached the abdominal cavity. A decidual membrane was passed on the tenth day. The patient did well, but part of the lower segment of the wound had to be opened, and some ligatures and placental débris escaped.

The patient went out of hospital with a sinus extending deeply into the pelvis where the cord had been brought out. The cord was left, and when it came away, as it did in a few weeks, the sinus, while not preventing her getting about, was an inconvenience. I tried, in April, 1911, to dissect it out. It commenced as a thick-walled tube, but gradually dwindled to a mere track between the coils of small gut extending deeply into the pelvis, and did not yield an old ligature as I had hoped. There was, however, much less discharge after this, and after closing and re-opening again several times it finally closed in August, 1912, and has now been soundly healed for over ten months.

The child (a girl) gave no trouble, but the whole head was moulded with a concavity on the left side where it had rested against the vertebral column. She is now three years old and apparently a normal child of that age in every respect. The mother is also in perfect health, but has to wear a belt to support the scar, which shows a tendency towards ventral hernia.

I have delayed reporting this case until finally assured of the ultimate result in the case of the mother, but I feel now that after ten months without any trouble the sinus may be considered to be finally closed. In the improbable event of such a condition coming under my care again I should not fall into the temptation of freeing more of the sac than could be done without risk of hæmorrhage, and should, as done in this instance, bring it out of the wound with the cord in the middle of it surrounded by a split drainage tube. I do not think there are any other points requiring comment except the extreme rarity of the condition.

I have to thank my colleague, Dr. G. Wilfrid Gosling, for his assistance at the operation, and Mr. F. Shann and Dr. A. W. Metcalfe for sending the case to me at the hospital, as well as for much information regarding the conditions before I saw it.

York.

UNIVERSITY OF BIRMINGHAM.—The Ingleby Lecture was delivered on June 5th by Professor J. T. J. Morrison, who selected as his subject Spinal Anæsthesia. The Ingleby Lecturer for 1914 will be Dr. T. Stacey Wilson. Dr. Otto J. Kauffmann has been appointed to succeed Professor Alfred H. Carter as joint Professor of Medicine, and Mr. W. F. Haslam has been elected joint Professor of Surgery, to fill the chair vacated by Professor H. Gilbert Barling on his election as Vice-Chancellor of the University. A Professor of Surgery has still to be elected in the place of the late Mr. Jordan Lloyd.

ETHYL CHLORIDE IN THE TREATMENT OF CUTANEOUS EPITHELIOMA.

BY HARALD SEIDELIN, M.D.,

SCIENTIFIC SECRETARY TO THE YELLOW FEVER BUREAU, SCHOOL OF TROPICAL MEDICINE, LIVERPOOL; FORMERLY PROFESSOR OF PATHOLOGY AND BACTERIOLOGY, SCHOOL OF MEDICINE, MERIDA, YUCATAN, MEXICO.

IT has recently been stated that the methods mostly in use in the treatment of rodent ulcer are X ray, radium, zinc ionisation, and solid carbon dioxide.[1] I would like to call attention to another method which has given good results in a few cases, and which possesses the considerable advantage of easy application, and therefore can be used by any practitioner without special training and without special apparatus. I treated some years ago whilst in Merida, Yucatan, Mexico, two cases of cutaneous epithelioma by means of freezing with ethyl chloride. The reason why I now wish to publish this experience is that I have recently had the opportunity, on the occasion of an expedition for the Liverpool School of Tropical Medicine, of re-examining the patients and confirming the results obtained. A third case of epidermoidal cancer of the nose, which came under my observation in the same place, was so advanced that I did not try the freezing method, but at once proceeded to extirpation which was immediately followed by the application of skin grafts according to the method of Thiersch. This case I likewise re-examined four years after operation, and found the patient, a woman over 80 years of age, in good health, with a smooth, almost invisible scar, without any sign of recurrence.

These cases, together with several others which were microscopically examined in my laboratory, illustrate the fact that carcinomata do occur, and not quite exceptionally, in tropical countries, in spite of what has been said to the contrary. It may be added that all three patients were natives of Yucatan, and that I also observed a number of carcinomata in other parts of the body, especially of the uterus. I have previously stated my opinion that the comparatively small frequency of carcinoma in the tropics is more apparent than real. This depends partly on faulty diagnosis and partly on the fact that in many hot countries where the mortality is comparatively high a smaller number of individuals reach the advanced age in which carcinoma is most frequent.

Ethyl chloride was recommended in the treatment of cancer by Howitz,[2] who chiefly used it in cases of carcinoma of the uterus, and to a less extent in some other forms of malignant tumour. In Howitz's second publication[3] two cases of cutaneous epithelioma are described which had been treated by other surgeons according to his method. The method has never come into general use, and certainly no permanent cure could be expected to be obtained in this way in tumours which are not of easy access; in fact, the author of the method regarded its palliative effect in hopeless cases as being of paramount importance.

In superficial forms of cancer, however, conditions are different. The freezing effect can easily penetrate to the deepest parts of a rodent ulcer, and a comparatively exact localisation and dosage are possible. Further, the well-known tendency of cutaneous epithelioma to remain localised justifies the use of a treatment which lasts for a few weeks; the danger of formation of metastases which in other forms of cancer makes immediate action so imperative is here insignificant. Should the treatment fail to give a satisfactory result, the affection will at any rate not have spread, but, on the contrary, probably have been reduced considerably, and the conditions for another treatment will consequently have improved. There is no inconvenience connected with the treatment; the patient can attend to his business, and need take no other precaution than that of keeping the ulcer covered with a small aseptic dressing. There is very little pain, lasting for a few hours only after each treatment, during the period of reactive hyperæmia. There is but little visible reaction of the immediate surroundings of the ulcer, and I have seen no gangrene, though I have kept the tissue frozen for five minutes or more—a considerably longer time than that recommended by Howitz (1–2 minutes).

The following brief notes will illustrate the cases.

CASE 1.—A man, aged 49 years, from a small town in the interior of Yucatan. The patient knew of no cases of tumours in his family, and his personal history was negative with regard to syphilis and venereal disease. The general state of health was good. Three years ago a small vesicle formed on the pinna of the left ear, and gradually developed into a flattened round ulcer, about 1 cm. in diameter, with red surface and sharp-cut edge. Fragments scraped from the surface showed the structure of an epidermoidal carcinoma. The affection had, by several physicians, been regarded as syphilitic, and the patient had been treated accordingly without any improvement. On Oct. 14th, 1907, treatment was commenced with ethyl chloride, which was sprayed on the ulcer in the ordinary way for about two minutes, the surrounding tissue being protected by cotton-wool. The treatment was repeated on the third day following, and afterwards every second day; the application was gradually prolonged until the tissues were kept white and hard frozen for five minutes each time. A gradual improvement took place and on Nov. 8th it was stated that a small crusta was seen which on being removed revealed a small red prominent granulation of 2 to 3 mm. in diameter; the granulation was scraped away with a sharp spoon and the surface touched with chromic acid previous to freezing. When treatment was suspended on Nov. 28th, after about 20 applications, complete healing had taken place.

The patient was examined repeatedly afterwards, and was seen again in January, 1912, that is more than four years since recovery. On each occasion a smooth scar was found, with no sign of reproduction; when examined for the last time the scar was scarcely visible. In this case the sharp spoon and chromic acid were used on one occasion, and the recovery was perhaps accelerated in that way. This, however, seemed doubtful, and in the following case no other therapeutic measures were taken besides the freezing, as improvement progressed steadily and no exuberant granulations were seen.

CASE 2.—A man aged 54 years. This patient, from Merida, observed seven years ago a small ulcer on the left side of the nose; it had increased slowly in size, being now of a somewhat irregular, almost oval shape, about 1 cm. in the largest diameter, and almost reaching the canthus internus of the left eye. No microscopical examination was made in this case, but the aspect seemed typical, and the diagnosis of epithelioma had already been made by several authorities, among others by a well-known surgeon in Paris, who had obtained an apparent recovery by the use of high-frequency current; reproduction had, however, taken place after three months. Treatment with ethyl chloride was commenced as in the first case, the eye being protected by cotton-wool, mackintosh, and flannel. The intervals between treatment were somewhat irregular; the total duration was therefore somewhat longer than in the first case. The tissues were kept frozen to begin with for two minutes; later on from six to seven minutes. Complete recovery was obtained after a little over two months, and at the last examination two years later, in June, 1912, the only vestige remaining was a small whitish patch on the otherwise somewhat dark pigmented skin.

It should be clearly understood that I do not advocate this method in the treatment of cancer in general, but only in cases of rodent ulcer and other forms of well-delimited cutaneous carcinoma.

[1] J. R. Morton: The Treatment of Rodent Ulcer, Proceedings of the Royal Society of Medicine, vol. vii., pp. 141-149, Electrotherapeutical Section, May, 1912.

[2] Hospitalstidends, Copenhagen, 1901, No. 42.

[3] Om Behandling of Cancer med Frysning, Copenhagen, 1902.

AN EXPERIMENTAL RESEARCH INTO THE ORIGIN OF THE INORGANIC CHLORIDE IN THE GASTRIC SECRETION.

BY CHARLES SINGER, M.A., M.D.OXON., M.R.C.P.LOND.

(*From the Research Institute of the Cancer Hospital, London.*)

THE literature on the chemical composition of gastric juice is now very extensive. In nearly all publications on the subject it has been assumed that the inorganic chloride present in the juice removed after a test meal is derived either from the meal itself or from the neutralisation of the secreted hydrochloric acid. The inorganic chloride is therefore usually regarded as devoid of physiological or pathological significance. This supposed insignificance of the inorganic chloride has been further emphasised by the adoption of analytical methods now in current use which expressly exclude the inorganic salt from the range of the physiologically active chloride.[1 2 3] It can, however, be shown that this inorganic chloride, whether physiologically active or not, may be at least the *result* of an active physiological process and is therefore not devoid of pathological and clinical meaning.

As long ago as 1903 Clowes and Jeffcoat,[4] in an investigation of the gastric secretion in cases of cancer of the stomach, pointed out that a diminished hydrochloric acid secretion may be associated with an increased sodium chloride secretion. They inferred that failure of the gastric cells to secrete a normal proportion of hydrochloric acid may to a certain extent be due to incomplete dissociation of sodium chloride in the cells concerned. More recently G. Graham,[5] working also on clinical lines, has attached diagnostic value to the ratio between the sodium chloride and the acid chlorides. These writers did not, however, base their conclusions on direct experimental evidence.

In 1912 the present writer, working in collaboration with Dr. S. B. Schryver, conducted an investigation into the chemical composition of the gastric juice in various pathological conditions.[6 7] In the course of that work the writer frequently encountered cases presenting considerable quantities of sodium chloride, but only minimal amounts of "physiologically active" hydrochloric acid. Moreover, it was found in such cases that the amount of sodium chloride present was considerably greater than that in a filtered test meal. An experimental investigation was therefore undertaken to ascertain the amount of sodium chloride present in pure gastric juice obtained without the administration of a test meal. After a number of preliminary experiments the method adopted was as follows. A large cat, whose stomach was quite empty, was completely anæsthetised with ether and then extended on a board with the head downwards at an angle of 45°. One end of a rubber catheter was inserted through the mouth into the stomach. 1/200 grain of pilocarpine nitrate was then given hypodermically and the dose repeated in half an hour. The gastric flow during one hour was collected, and the fluid subjected to analysis. Special care was taken throughout the experiment to prevent the admixture of the copiously secreted saliva with the gastric juice. The animals were completely anæsthetised throughout the experiment and were destroyed before return of consciousness.

The gastric juice thus obtained was a somewhat cloudy liquid often containing a few hairs and sometimes slightly blood-stained. As will be seen from the table, the amount of sodium chloride was a variable quantity, obviously related neither to the amount of "physiologically active" hydrochloric acid—i.e., total chloride minus inorganic chloride—nor to the peptic power. Whatever, therefore, be the function or origin of the inorganic chloride in the gastric juice, it appears to be more or less independent of the secretion of either hydrochloric acid or pepsin.

The amount of gastric juice obtained varied in different animals from a few drops to 14 c.c. It was found impracticable to work with quantities of less than 6 c.c., and thus only about one animal in three yielded a serviceable quantity. The juice when obtained was diluted to a convenient bulk and then filtered and analysed. The results of the analyses of seven cases are given below in terms of the decinormal equivalents of the undiluted gastric juices.

—	No. of Animal.						
	I.	II.	III.	IV.	V.	VI.	VII.
Acidity to phenolphthalein	4·0	6·6	9·5	2·3	4·9	5·6	8·2
Acidity to dimethylamidoazobenzene	2·8	5·4	8·0	2·1	3·4	4·8	5·0
Total chloride	11·4	14·0	15·1	9·5	13·4	11·8	18·5
Inorganic chloride	6·3	7·0	5·7	8·0	7·8	6·2	10·0
"Physiologically active" chloride ...	5·1	7·0	9·4	1·5	5·6	5·6	8·5
Peptic index	40	54	73	83	—	140	—

Conclusions.—The inorganic chloride present in filtered gastric juice is experimentally found to be in large part the result of a secretive or osmotic process in the stomach wall, and its amount must, therefore, be affected by pathological changes in that wall. Hence, the amount of inorganic chloride in the gastric juice is of pathological and clinical significance.

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Medical Societies.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Spread of Infection by Ascending Lymph Stream of Nerves from Peripheral Foci to Central Nervous System.

THE quarterly meeting of this association was held at the rooms of the Medical Society, Chandos-street, W., on May 27th, under the presidency of Dr. J. GREIG SOUTAR. Sympathetic reference was made by the President to the decease, in his eighty-seventh year, of Dr. W. B. Tate, of The Coppice, Nottingham, who joined the association in 1857. Dr. Soutar said the deceased gentleman had the sympathetic nature which enabled him to be to his patients not only physician but also friend. A vote of condolence with his daughter was passed by members upstanding, and the secretary was instructed to communicate it. Dr. Charles Mercier was very warmly welcomed back to the meetings after his recent severe illness. The meeting unanimously accepted the resolution of a special committee that representations be made to the Home Secretary to the effect that it was most undesirable that criminal lunatics be sent to county or borough asylums. The Lunacy Commission had expressed its support of this attitude. The meeting was also unanimous in urging that Ireland should be included in the Mental Deficiency Bill now under discussion in the House, and it was shown that Ireland was in special need of such an enactment, even more so than the parts of the kingdom included in the measure.

Dr. R. G. ROWS communicated, with the aid of a fine series of microphotographs, a paper by himself and Dr. DAVID ORR, entitled "The Spread of Infection by the Ascending Lymph Stream of Nerves (ascending neuritis) from the Peripheral Inflammatory Foci to the Central Nervous System." Experimental evidence was adduced as to the manner of development of acute myelitis, the results of which were calculated to throw light on the pathogenesis of acute poliomyelitis and analogous conditions. It had been shown that toxins and organisms could travel by the lymph streams of peripheral nerves into the central nervous system. But while they could prove that degeneration of the myelin sheaths of fibres in their intramedullary course might thus be produced, they did not find unequivocal evidence of actual myelitis. In the present series of experiments the capsule containing the organism was placed much nearer the spinal cord than in the previous series, the cord being exposed at the level of the lumbo-sacral enlargement, and a capsule containing staphylococcus pyogenes aureus was sutured against the dura mater. In some other experiments the capsule was placed close against an intervertebral foramen. All the experiments gave positive results, though in some instances the change was more acute than in others, owing to the capsule having burst and the nervous system being invaded by the organism. Generally it could be said that the nervous and meningeal tissues nearest the focus of irritation suffered most, and the phenomena became less marked from without inwards, with a minimum near the central canal of the cord. In the epidural tissue polymorphonuclear leucocytes were present in abundance, and plasma cells, with others which had been called by Wickman polyblasts. In the dura mater of the posterior root ganglion, in the substance of the ganglion, especially at its proximal pole, in the perineurium of the spinal roots, in the adventitial sheath of the vessels in these roots, in the pia mater, and far along the vessels passing into the spinal cord, plasma cells in quantity could be seen. The cellular infiltration concerned the veins only, the arterioles being unaffected. That was explicable on the view that the lymph regained the general circulation through the walls of the veins and capillaries, and in this instance the toxins in it produced irritative effects. It was found that the dura mater, with its covering of highly vascular loose areolar tissue, formed an efficient protection to the spinal cord, and served to some extent to neutralise infection. Only rarely were organisms found to have passed the barrier of the dura mater. Yet in both the white and the grey matter of the cord the vessels exhibited marked pathological changes; they were dilated, infiltrated with round cells, sometimes

thrombosed, sometimes were the seat of hæmorrhages, and sometimes also the neuroglia of the cord showed evidence of pathological irritation. Acute degenerative changes also occurred in the nerve cells of the grey matter. The evidence adduced by Wickman and others that poliomyelitis was essentially a disseminated meningo-myelo-encephalitis was incontrovertible. In that condition the intervertebral ganglia were affected in the same way as the cord, while the peripheral nerves were normal. The sympathetic nerve joined the mixed nerve near the distal end of the root ganglion, and the suggestion was made that the exciting agent of poliomyelitis reached the central nervous system from the intestine by the sympathetic nerves entering at that point. In this way the integrity of the peripheral nerves could be explained. The resemblance between the experimental phenomena produced by them (the authors) and the pathological phenomena found in acute poliomyelitis was very close indeed, and there could be little doubt that poliomyelitis was essentially a lymphogenous infection. The principles enunciated in this thesis might also be applied to general paralysis, trypanosomiasis, Landry's paralysis, and rabies. In all the experiments a large collection of plasma cells and polyblasts had been found at the proximal end of the posterior root ganglion, and the appearances suggested a special reaction at that spot. This appeared to indicate some mechanism of defence against the further upward extension of toxins and organisms, constituted possibly by some local anatomical peculiarity.

The PRESIDENT pointed out how important such work as this was, it being along these lines of painstaking experimentation that the successful treatment of many cases now baffling the profession was evolved. It once more emphasised what he had always contended, that this country was not behind others in important original research, and the society and the profession generally were indebted to Dr. Orr and Dr. Rows for this work which they had done and were continuing.

Dr. G. DOUGLAS MACRAE said he had always taken a great interest in the work of Dr. Rows and Dr. Orr, none the less because he had himself done work of somewhat similar character. He asked whether the child ever acquired poliomyelitis from the diseased mother. He agreed there was no selective toxic action in the diseases now under discussion, yet the authors seemed to consider that the channel of infection was specially the lymph stream. He also asked whether the clinical symptoms in the cases pointed to an intoxication of the nervous system. He suggested that the fulminating cases of fever in children, with rapid death, were probably due to the conveyance of the toxin by means of the lymph stream, as in the conditions under discussion. Such acute cases of fever might furnish valuable post-mortem material for investigation. He mentioned an interesting case of alternations between maniacal excitement and acute parotitis.

Dr. ROWS replied that the pneumococcus could pass through the placenta, and had been found in the fœtus. The point the paper set out to make was that the toxin got into the lymph stream from the nerves adjacent to the affected nerves. In tabes there was no infiltrative reaction, the irritant proceeded to produce a hyaline or degenerative change. In the experiments the reaction was most marked where the vascular condition was greatest. It was well known that in acute specific fevers, or some of them, the spread of toxins was from the mucous membranes. But in the acute cases referred to by Dr. Macrae he suggested there was a general blood invasion, and that this was answerable for the delirium and the rapid end.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Ante-mortem Thrombosis.—Multiple Neuromata.

A MEETING of this society was held on June 4th, Dr. J. PLAYFAIR, Vice-President, being in the chair.

Dr. R. A. FLEMING read a paper on Ante-mortem Thrombosis in the Right Heart and Pulmonary Arteries as a Cause of Death in Lobar Pneumonia. He said that he had been struck when pathologist at the Royal Infirmary by the uniformity with which clotting occurred in the right heart and the larger pulmonary arteries in pneumonia. These firm, opaque, fibrin clots might arise in the right auricle or ventricle, and were attached fairly firmly to such structures as the musculi pectinati of the right auricle, the chordæ tendineæ of the tricuspid valve and the columnæ carneæ of the right ventricle, and they might extend through the pulmonary orifice and reach into the small branches of the pulmonary artery. These clots were not adherent to the vessel wall and often showed some coloured, and obviously post-mortem, clot associated. It would be of great practical importance if it could be established that colourless clots were ante mortem in formation. In 61 cases of lobar pneumonia on which Dr. Fleming performed a necropsy he carefully noted the condition and kind of blood-clot present. Of these, 39 showed ante-mortem clotting in the right auricle, right ventricle, and pulmonary arteries, and of these 39, in 16 was the clot adherent and large in amount, while in the remaining 23 the clot was mostly colourless but not adherent. In most of the cases noted there was a small amount of similar colourless clot in the left heart. Of 25 cases of croupous pneumonia on which Professor D. A. Welsh, of Sydney University, performed a necropsy, in 19 there was clot in the same situations as in the 39 cases examined by Dr. Fleming. By way of contrast he examined 160 consecutive cases in the post-mortem room (excluding lobar pneumonia) and found colourless clotting in only 20. As to the question whether the thrombosis in croupous pneumonia was generally agonal or might not in a larger number of cases than was generally supposed be present for hours, or even days, before death, the very essence of fibrinous non-coloured clot seemed to depend on its formation during the circulation of the blood. The blood in croupous pneumonia was specially rich in fibrin, and leucocytes in the blood and in the lung in particular supplied the necessary thrombokinase, and these facts, to Dr. Fleming's mind, afforded less difficulty in accepting the theory of ante-mortem cardiac thrombosis. Another factor which, according to Wiener, greatly aided thrombosis was the presence of great excess of CO_2 when a large area of the lung was inhibited from action. In his experience the branches of the pulmonary artery of the affected lung were more generally filled with colourless clot than were those of the unaffected lung. He had also noted that this clot was often associated with commencing breaking down of the pneumonic area in the lung. There was no reason why life should not be still possible with the gradual development of ante-mortem thrombosis, although there must of necessity be an ever-increasing embarrassment of the circulation. The most obvious signs of such thrombosis occurring during life were increasing engorgement of the jugular veins in the neck associated with gradual weakening, and later, disappearance of the second sound at the pulmonary area. In every lung affection in which there was interference with the pumping action of the right ventricle this second sound was accentuated. A gradual failure meant failure of the right ventricle to pump its blood into an engorged lung, but a gradual failure of the second sound in a case of croupous pneumonia had, he believed, a more sinister import—namely, that thrombosis had begun and that the thrombus was mechanically interfering with the closure of the pulmonary valves. In five cases of this disease (croupous pneumonia) he had been able to diagnose the clotting before death and to verify it by post-mortem examination. If there was a danger of cardiac and pulmonary thrombosis, then stimulation, particularly of the heart, should be the routine treatment for all cases in which it might be expected to occur. 1. Every case of croupous pneumonia should be early and continuously treated by the administration of a direct cardiac tonic, such as digitalis or strophanthus. 2. Such diffusible stimulants as spirit of chloroform and aromatic spirit of ammonia should be given at once if the heart showed any signs of difficulty. 3. Oxygen might counteract the excess of CO_2. 4. It might be wise to depart from the usual plan of preventing any change of posture of the patient in bed. 5. The use of antithrombin ferment would be ideal, but at present this was not practicable. 6. If they were convinced that ante-mortem clotting was a cause of death in pneumonia, bleeding should never be performed except in particularly robust patients, and never for what looked like engorgement of a dilated right heart. It might only aid thrombosis which had already begun. Auscultation of the pulmonary area should in any case be first carefully carried

out.—Dr. ALEXANDER GOODALL said that many must be familiar with the tragedy of a patient dying suddenly after having been tided past the crisis in acute pneumonia. In this disease the coagulation time of blood was very rapid, and this shortening of time went on progressively diminishing until the crisis, when it gradually began to lengthen out; in cases where lysis was the rule this elongation of coagulation time was still more slow. It might be taken as a rule that in all cases of croupous pneumonia which showed a coagulation time of less than one minute death followed. This shortening of the coagulation time had no relation to temperature or to the number of the leucocytes present, though it seemed to have a relation to the number of degenerated leucocytes present.—Dr. W. T. RITCHIE said that he had found it very difficult to determine the amount of engorgement of the cervical veins owing to the respiratory movements and to the action of the sterno-mastoid muscles. He thought the question rather was: Was not this due to cardiac dilatation? One could obtain evidence of this condition earlier than could the presence of white blood-clot in the heart and arteries be determined. The dusky hue of the face, especially of the lips and nose, and weakness of the first sound showed the presence of dilatation. He advocated the intravenous use of strophanthin or digitalin in every case of cardiac dilatation.—Dr. J. EASON stated that he had found potassium iodide of the greatest value in cases of croupous pneumonia, and it had been proved that it delayed the coagulation time of the blood.

Dr. A. NINIAN BRUCE communicated a paper on Multiple Neuromata of the Central Nervous System, their Structure and Histogenesis, with a brief review of the present position of the neuron theory. The investigation was begun by the late Dr. Alexander Bruce and finished by Dr. James W. Dawson. Dr. Ninian Bruce gave a description of the findings in the central nervous system in a case of spastic paraplegia with extreme contractures, the patient having died at the age of 30. When sections were made later to discover the nature of the lesion a very rare and unusual condition was found. Scattered irregularly throughout the spinal cord, pons, medulla, and mid-brain were small nodules. These were sharply marked off from the surrounding tissue and were closely related to the walls of blood-vessels. These nodules on appropriate staining were found to be composed of nerve fibres twisted and contorted together like balls of wool. They did not contain any nerve cells. They could be traced along the blood-vessels from the region of the emerging anterior nerve roots, along the periphery of the cord and passing into the white matter where, meeting with some obstruction, they became twisted like a ball of wool. In the medulla and pons nodules were found, but these were not circumscribed. They were also related to blood-vessels and consisted of a large number of fusiform cells which in places were united end to end to form chains. In these cells it was possible by appropriate staining to distinguish the formation of fibrils and the laying down of myelin. It was more difficult to account for these facts upon the "central outgrowth" theory than upon the "peripheral cell-chain" theory. The question of the relationship of the nerve fibre to the nerve cell was then discussed, and the various points upon which the different theories agreed and differed from each other were described. A brief history of the neuron theory was then given from the points of view of the genesis of nerve fibres, of their regeneration after section, and of their occurrence in tumour formation. There were three criticisms of the "outgrowth" theory which had not yet been satisfactorily explained. (1) It was difficult to conceive of a prolongation of a cell so disproportionate to the element which gave it birth; (2) it was impossible that a differentiated substance, like the axis-cylinder, could bud, as such a principle was against the data of general cytology, which attributed to differentiated substances only a functional rôle; and (3) the absence of any satisfactory demonstration of regeneration of fibres in the central nervous system might be attributed to the absence of the activity of the neurilemma cells. This case thus was a confirmation from the aspect of a pathological new formation, of the multicellular structure of the peripheral nerve fibre, and while they had no sufficient grounds for stating that the old neuron theory had had its day, they must not, on the other hand, affirm that the cell-chain theory had no foundation.—Sir THOMAS CLOUSTON, Dr. FLEMING, and Dr. EDWIN BRAMWELL took part in the discussion which followed.

SCOTTISH OTOLOGICAL AND LARYNGOLOGICAL SOCIETY.

Nasal Thermometry.—Exhibition of Cases.

A MEETING of this society was held in the Victoria Infirmary, Glasgow, on May 31st, Dr. A. BROWN KELLY being in the chair.

Dr. BROWN KELLY contributed a paper on Nasal Thermometry, a method of determining the influence of the nose on the temperature of the inspired air, and demonstrated its use. Tables were given showing the difference in temperature between the inspired and expired air, and the variations which occurred in varying degrees of patency of the nasal passages.

Dr. BROWN KELLY also showed: 1. A woman who had been operated on by Mr. R. H. Parry for Compression of the Trachea and Œsophagus by an abscess situated between these structures. 2. A man with Double Laryngeal Abductor Paralysis and other symptoms of central nervous disease due probably to patchy gummatous lepto-meningitis of the medulla and of the cord in the cervical and lumbo-sacral regions. 3. A woman with Hysterical Aphonia of long duration with short periods of restoration of voice. 4. A child recovered from Osteomyelitis of the Superior Maxilla, so-called "empyema of the antrum in infants." 5. A woman with Papillomata of the Nose. These were growing from the region of the middle meatus, and, like similar growths in the larynx, they had a great tendency to recur. 6. Two cases, a woman and a girl, with congenital closure of the posterior nares. Both have been operated on, but the difficulty of keeping the openings patent was emphasised. 7. Three very interesting cases of dermoids of the anterior border of the nose.

Dr. ALBERT A. GRAY gave a lantern demonstration tracing the Evolution of the Round Window and the Aqueduct of the Cochlea from Reptiles to Birds and Mammals. The varying size of the aqueduct of the cochlea and the relation of the round window to the cochlea and to the aqueduct at different stages of evolution was clearly shown. Dr. Gray also gave a microscopic demonstration of the changes in the labyrinth found in cases of otosclerosis and deaf-mutism. He described, too, a nerve ganglion in the human temporal bone which he had discovered, and which had been hitherto unrecognised, showing microscopic preparations. He also showed patients operated on for aural suppuration with intracranial complications, and a boy with congenital absence of the cartilage of the auricle on either side.

Dr. J. R. DREVER showed two patients with Chronic Œdema of the Face. In both there was purulent nasal discharge. From this an autogenous vaccine had been prepared, and in both the use of this had been followed by beneficial results to the facial as well as to the nasal condition.

Dr. J. L. HOWIE exhibited a case of Congenital Defect of the External Ear.

Dr. J. WALKER DOWNIE showed a case of Carcinoma of the Nose. He also showed a specimen of Epithelioma of the Auricle, and a man in whom Dr. T. K. Dalziel had performed an extensive operation for Malignant Disease of the Tongue, Tonsils, Pharynx, and Palate, with Glandular Involvement.

Dr. J. G. CONNAL exhibited a woman on whom he had operated for Aural Suppuration with Labyrinthine Symptoms. The radical mastoid operation was performed and a fistula of the external horizontal canal was found. No pus came from the fistula and no granulations were present in the neighbourhood. Dr. Connal did not, therefore, open the labyrinth. The woman recovered.—An interesting discussion took place in reference to the indications for labyrinthotomy in middle-ear suppuration. There is still a good deal of diversity of opinion on this subject.

Dr. CONNAL also showed a man in whom was exemplified the difficulty which sometimes arises in deciding whether a laryngeal lesion is malignant, syphilitic, or tubercular. In this case one cord was dark red and swollen and restricted in movement. As the condition was improving under anti-syphilitic treatment opinion inclined towards syphilis.

Dr. JAMES ADAM showed a case of Superficial Ulceration of the Pharynx, Palate, and Larynx. At first sight it appeared undoubtedly syphilitic, but it has remained stationary for over two years despite antisyphilitic treatment. Wassermann reaction is doubtful. Pneumococcal

infection, tubercle, syphilis, and pemphigus were opinions offered as to its nature.

Dr. W. S. SYME reported at some length a case of Otogenous Temporo-sphenoidal Abscess in which the abscess capsule, a very thick one, had been removed by operation during life. The abscess had evidently been present for some considerable time and only gave rise to symptoms after the youth had received a blow on the head. The abscess was opened and drained and two days later he became comatose. The drainage-tube was removed and the opening in the dura enlarged. A necrotic mass presented and on removal was found to be the capsule of the abscess. The patient did well for six weeks and the abscess cavity filled up, but he ultimately died with a second abscess in the frontal region.

Dr. SYME also showed a man, aged 72, with Malignant Disease of the left side of the Larynx, and a girl with Submucous Cleft Palate.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Enteric Fever.—Tests for Liver Function.

A MEETING of this section was held on May 16th, Dr. H. C. DRURY being in the chair.

Sir JOHN MOORE described two cases of Enteric Fever presenting unusual features. In one the original fever was succeeded by a recrudescence lasting about 20 days. An apyrexial period of 18 days followed, when a true relapse, lasting a fortnight, set in. Nearly two months later the patient again became feverish, and suffered from catarrhal jaundice. He made a good recovery. There were never serious intestinal symptoms. The second case was one of protracted course. There were epistaxis and intestinal hæmorrhage. Convalescence was complicated by "typhoid spine." An X ray examination by Dr. W. G. Harvey showed osteo-periostitis of the left side of the third, spreading downwards to the fourth, lumbar vertebra.—Dr. H. C. DRURY said that the first case illustrated the tendency in light cases of enteric fever to relapse. The lightness of the cases was shown by the fact that there was never any hæmorrhage, suggesting that the ulceration was not very deep. He did not suggest that heavy cases did not relapse, but he considered this more likely to occur in the mild cases.—Professor E. J. MCWEENEY, referring to the first case, said that as there were three or four distinct relapses it would have been interesting to see if there were any fluctuations in the agglutinating power of the serum. He agreed that the attacks of jaundice were due to infection of the bile passages with bacillus typhosus.—Dr. J. M. FINNY discussed the question of relapse. He said that some soldiers who had been inoculated against typhoid fever had, shortly after inoculation, been exposed to infection and had contracted very severe typhoid fever. The more recently inoculated cases, in fact, seemed to suffer most. He drew a parallel between this and relapses.

Dr. G. E. NESBITT gave an account of Four Tests for Liver Function, which he stated were now in very general use at some of the continental clinics, and which he considered, from his own experience, would be found of service in the diagnosis of obscure liver disturbances. Two of them, he said, depend on the fact that although considerable tolerance of glucose may exist with even advanced disease of the liver, two other simple sugars—viz., lævulose and galactose—are excreted in the urine in considerable quantity after their administration by the mouth where disturbance of liver function exists. In the lævulose test 100 grm. of this sugar are given in the morning. Any trace of sugar in the urine indicates liver disorder, but the test will not differentiate the nature. There is a serious objection that the size of the dose is most objectionable, being frequently followed by nausea, vomiting, and diarrhœa, and the further fact that about 10 per cent. of normal cases show some sugar in the urine renders the test unreliable. The use of galactose in 40 grm. dose forms a much better test. Normal cases excrete sugar for one, or at most two, hours subsequently. Cases with general *cell*, as apart from local lesions in the liver eliminate sugar for five, six, or more hours in considerable quantity. The test is, therefore, positive in, e.g., cirrhosis of all varieties, toxic forms of icterus, and parenchymatous degeneration, but negative in local lesions such as tumours, and in two more or less general conditions—viz., chronic passive congestion and amyloid disease. A further test, depending on quite a different function of the liver, is the use of amino-acids. 10 grm. of glycocoll are given, and the amino-acid in the urine estimated by a modification of Henrique's method. No increase over the usual small traces is found where the liver is healthy, but disease of this organ causes the appearance of substantial amounts, even up to 5 grm. The most simple, novel, and reliable of these tests, according to Dr. Nesbitt, is the "aldehyde reaction." Two drops of Ehrlich's aldehyde solution (a 2 per cent. solution of dimethyl-para-amino-benzol-aldehyde in 50 per cent. HCl) are added to 5 c.c. of urine. A deep rose-red colour indicates excess of urobilinogen, and, therefore, insufficiency of the liver, which is allowing urobilinogen (formed in the intestines from bilirubin) to pass through into the systemic circulation. Normal cases show only the faintest trace of pink, which constitutes a negative reaction. This test is given by any condition of the liver which will derange even a small number of cells, but is most strongly positive in such conditions as chronic congestion, cirrhosis, tumours, degenerations of various forms, syphilis, and amyloid disease. Further, the reaction will be obtained frequently before physical signs of any kind have appeared.—Dr. SMITH congratulated Dr. Nesbitt on the trouble he had taken in bringing forward the results of his investigations. He considered that caution should be exercised in drawing any conclusions from risky tests. It would be difficult to exempt any organ in the abdomen—the pancreas, for instance—from having shared in the chemical changes. Everyone knew that attempts had been made to demonstrate, from experiments on the urine, the existence of pancreatic disease. He therefore took exception to the title of the paper, and asked how it could be known that it was the function of the liver and not of the pancreas. The expense of the experiments would probably prohibit their use to any large extent.—Professor MCWEENEY felt that Dr. Nesbitt was going on the right lines. With regard to testing the capacity of the liver to deal with sugars he remembered the development of this question since Straus brought it forward in 1897, and so far as he recollected the best reason for using lævulose as a test of the adequacy of the liver was that lævulose could be used by the liver alone, whereas galactose could be used by the muscles also. The chief reason for using galactose was that the dose was considerably smaller. He submitted that in a severe case of liver inadequacy the sugar appeared earlier in the urine than it did if the liver was not so much out of order. The time of collection of the urine after the administration of the test was, therefore, of importance.

SECTION OF OBSTETRICS.

Some Sequelæ of Labour.

A MEETING of this section was held on May 23rd, Sir ANDREW HORNE, the President, being in the chair.

Dr. BETHEL A. H. SOLOMONS read a paper on Some Sequelæ of Labour, in which he submitted the results of examining 543 primiparæ on the sixteenth day of the puerperium.

The PRESIDENT was astonished at the very high percentage—i.e., 48—of lacerations of the cervix uteri which were found to have occurred in primiparæ, but, of course, the lacerations varied from one-third of an inch to an inch. He considered that if that large number of lacerations of the cervix occurred one would expect severe post-partum hæmorrhage, and it should cause the obstetrician to try to find the origin of the hæmorrhage, and he would deem it a duty to stitch the cervix immediately. He thought that most of the backward displacements he frequently found were congenital and unimportant, and no matter what treatment might be carried out, at the end of two months if the patient was again examined this displacement would be found to have recurred. He suggested that if the patient was examined two months after confinement it could be ascertained if there was any real displacement, and an opinion could then be formed as to the treatment necessary. He looked on it as a duty to suture a ruptured perineum at once. Catgut sutures very often became absorbed too soon, and he invariably used the ordinary silkworm gut, and found it successful. He had not yet adopted early rising, and from what he had heard he would be

chary in doing so.—Dr. E. HASTINGS TWEEDY said that Dr. Solomon's statistics of lacerated cervices would come as a surprise to many. It had been asserted by an eminent Fellow of the Academy that such tears did not occur in normal delivery. This view was in the main true, but was subject to exceptions, for he (Dr. Tweedy) had reported tears after perfectly normal child-birth. Posture had no effect in bringing about a condition of retro-displacement; it owed its origin to the presence of a full bladder or to congenital defect in the majority of cases. An improperly applied binder was another direct cause, and one that was seldom appreciated. Before the application of a binder the uterus should be sharply anteflexed, and the third pin should be placed so as to groove the binder above the uterus and fix the latter in a condition of anteflexion. Pulmonary embolus was a septic condition, and did not arise in consequence of getting the patient up too soon. It was, moreover, associated, in his experience, with a quick pulse. He had no faith in the power of calcium lactate to stay the progress of a septic clot.—Professor W. H. THOMPSON said he did not consider that calcium salts administered by the mouth or hypodermically had the effect of hastening coagulation.—Mr. J. SPENCER SHEILL said that he had seen many backward displacements of the uterus produced by tight lacing of the corset before complete involution had taken place. The maximum coagulation resulted from calcium salts if administered at broken periods.—Dr. ALLAN said he had never found calcium salts of much use in helping coagulation. He had found that in suturing the perineum catgut alone did not give as good results as silkworm gut, or a combination of both.

Dr. SOLOMONS, in reply, said that his experience of the calcium salts only extended to cases of threatened abortion, miscarriage, or premature labour, in which he had found them of very little influence. He was convinced that when forceps was applied to the cervix which was not fully dilated a tear always resulted. He agreed that 48 per cent. of tears in his series was greater than the ultimate results would have shown, but he had pointed out that the paper was based on examinations made 16 days after confinement, and he felt sure that a great number of the tears then apparent would afterwards heal.

Reviews and Notices of Books.

The Principles and Practice of Obstetrics. By JOSEPH B. DE LEE, M.D., Professor of Obstetrics in the Northwestern University Medical School, Chicago. London and Philadelphia: W. B. Saunders Company. 1913. Pp. 1060. Price, cloth, 35*s.* net.

THIS treatise, as the author tells us in his preface, is the outgrowth of a volume, entitled "Notes on Obstetrics," used for 14 years as a text-book by the junior and senior classes at the Northwestern University Medical School. The volume is mainly a reflection of the author's 21 years' experience as a teacher of physicians, students, and nurses.

As Dr. De Lee rightly remarks, for the student brevity and system are essential, while for the practitioner a wealth of detail and of illustration is necessary to tell him what to do in a given case. To accomplish these purposes in a single volume two sizes of type have been employed, and the less important matter and details of treatment have been printed in smaller type. For the same reason lengthy descriptions of operations have been omitted from the text, and have been put as full explanatory legends under the illustrations depicting the successive steps of the procedures described.

The resulting volume is a handsome one of some 1000 pages, profusely illustrated with 913 illustrations, of which 150 are in colours. The usual division of the subject into four parts is adopted—viz., the physiology, the conduct and pathology of pregnancy, labour and the puerperium, and operative obstetrics. In describing the functions of the liquor amnii the author apparently favours the view that it serves as food for the fœtus to some extent, and adduces as an argument in proof of this that in a case of occlusion of the gullet the fœtus was atrophied, but it seems to us very likely that this was really a case of maldevelopment. We cannot agree that the special senses are all present in an infant a few hours after birth; indeed, it is extremely doubtful if this is so. In discussing the question of the lower uterine segment Dr. De Lee agrees with Bayer that sometimes the cervix unfolds in pregnancy and sometimes it does not. There is a full discussion of the possible causes of the onset of labour, and the researches are quoted of Von der Heide, who injected fœtal serum into pregnant women at full term and evoked labour pains, which he explained as due to some anaphylactic action.

In the chapter on the physiology of labour attention is called to the important subject of the location or degree of advancement of the presenting part in the birth canal. This is often neglected in the description of a case of difficult labour, and the diagnosis of the exact degree of engagement is overlooked by the student and practitioner, although its exact determination may obviously be of great service in deciding upon the correct method of treatment. In the chapter on the mechanism of labour, in which there is a very good description of this difficult subject, it would have been better if the fact had been pointed out that the movement of so-called flexion is in reality not a movement of the head on the trunk. The instructions given for the use of the obstetrical nurse are good and useful, and, as the author says, must save much trouble. The much-debated question of asepsis or antisepsis in the conduct of a labour is carefully considered, and we are sure that all practical obstetricians will agree with the author when he says that pure asepsis is impossible in the ordinary conduct of a midwifery case, and that there must of necessity be a combination of asepsis with antisepsis. As he rightly remarks, if the region of the vulva is kept aseptic with antiseptic solutions, if the gloves are kept sterile by frequent immersions in the same, and if the few objects which must necessarily be introduced into the genitalia are absolutely aseptic, one can conduct the most difficult and prolonged obstetric manipulations in the dirtiest hovel with brilliant results.

In the treatment of eclampsia we are told that in the author's experience of 72 cases the patients did better after early delivery so far as the convulsions were concerned, but the proportion of actual recoveries was only slightly increased. Dr. De Lee, however, favours emptying the uterus under narcosis after the first convulsion, and maintains that experience is accumulating to show that this method gives the best results. The chapters on the toxæmias of pregnancy are interesting and full, and contain a very fair review of all the different theories held. In the treatment of cases of inevitable abortion tamponing of the cervix and vagina is recommended, the tampon to be left for 16 to 24 hours, and at the time of its removal preparations to be made so that if necessary the uterus may be evacuated, or if the ovum has been spontaneously expelled, curetted, to make sure that nothing is left behind.

The term "abruptio placentæ" is suggested for accidental hæmorrhage in contrast to placenta prævia. In treating these cases the three rules are laid down that the uterus must be emptied, the hæmorrhage stopped, and the anæmia relieved. If the cervix only admits two fingers and is only partly effaced the membranes are punctured, a colpeurynter is introduced into the uterus, the vagina tamponed as tightly as possible with sterile wool, and a binder put on with as much counter pressure as possible; while in cases where the cervix is tightly closed and internal hæmorrhage going on the same treatment is adopted. Dr. De Lee does not favour accouchement forcé, but thinks that Cæsarean section is justifiable if the patient is in suitable surroundings.

The use of a hydrostatic bag in the treatment of placenta prævia meets with the warm commendation of the author, and he prefers it in many cases to bipolar podalic version by Braxton Hicks's method. The section on the treatment of cases of contracted pelvis is characterised by a very clear conception of the problems involved, and the conclusions are such as will meet with the approval of practically all English obstetricians. Dr. De Lee favours prolonged expectancy in all but the absolutely contracted pelves, followed by a trial with the forceps, failing which craniotomy must be resorted to. With a high and movable head or an abnormal presentation version may be performed. A warning is given as to the injudicious attempt to deliver with forceps in cases where a short trial has convinced the operator that they are powerless to effect delivery, and it is pointed out that in such cases craniotomy is more humane and the attendant can provide ideal arrangements for subsequent labours.

The book is one which should appeal to senior students and practitioners, and bears evidence that the author has made a good use of his experience and that he possesses that sense of proportion and order which is essential for good teaching. At the end of each chapter there is a short and useful bibliography, and the index is full and accurate.

Comparative Anatomy of Vertebrates. By J. S. KINGSLEY. London: John Murray. 1912. Pp. 401. Price 12*s.* net.

THE only fault that we have to find with Dr. Kingsley's manual is its size. In the present advanced state of knowledge of the anatomy of vertebrata it is not, in our opinion, possible to compress the information into so short a space, comparatively speaking. It thus follows that much of importance is unduly abbreviated, though we cannot accuse the author of sacrificing one part of his subject for another. Indeed, all the subdivisions of the vertebrata are treated with equal fairness, and the description of "the soft parts" is not neglected for that of the skeleton, which was formerly the main part of vertebrate anatomy for the purposes of the student. Nor is the student overwhelmed with detailed osteology, a feature in which this work contrasts favourably with some others. Perhaps the extinct vertebrates are treated a little too slightly. Nevertheless, the pages devoted to the skeleton are more numerous than those devoted to any one other section of the body.

The illustrations are well selected and illustrate the text adequately. They present two particular features of interest and importance. First, the figures are for the most part new to text-books, having previously only appeared in memoirs, or are new figures altogether. We note, for instance, figures of the skull of Hatteria from the excellent monograph upon the skeleton of that animal by the late Professor Howes and Mr. Swinnerton, also many diagrams of the circulatory system from the admirable works of Hochstetter. As to the completely new figures, the author has laid under contribution the preparations in the museum presided over by Professor McClure, who is one of the foremost American vertebrate anatomists. A second distinguishing character of the illustrations is the prevalence of what the writer calls "stereograms," which are solid figures built up from series of sections. These render exceedingly clear the relations of such organs as the excretory tubules, which require placing before the reader in this solid form, at any rate if he be new to the subject.

Dr. Kingsley is far too experienced a teacher and investigator to have allowed inaccuracies to escape him. We can find no positive errors in those sections of the book which have been scrutinised with special care. At the same time, all his statements will not be accepted by everybody as correct and indisputable teaching. Thus, we are not all convinced that the anterior abdominal vein is quite homologous throughout the vertebrate series; that of birds is held, at least by some, to be not the same structure as the similarly named vein of certain reptiles. Again, it has been held, and by no less an authority than the late Professor Gegenbaur, that the mammary glands of the monotremata are not homologous with those of marsupials and placental mammals. In the latter those glands are stated to be of the sebaceous class and in the former of the sweat gland type. But others have other views. In some disputed points Dr. Kingsley gives two views. Thus, he does not commit himself to a hard-and-fast pronouncement of the mode of origin of the limbs, but sketches briefly the continuous fold theory and the opinion of some that the limbs are traceable to gill arches. In another hotly debated matter Dr. Kingsley is careful to be no partisan. The palæontologists, as a rule, hold that the primitive triconodont tooth is produced by the appearance of additional protuberances upon a primitively single tooth; while others, on the embryological side, maintain that this three-rooted and cusped tooth is due to the fusion of three at first quite separate teeth. It is good for a text-book to preserve an open mind on debateable points, as the commencing student thus gets an early impression that the science of comparative anatomy is not yet an entirely worked out mine of knowledge, and that there remains much for him to do.

The Practitioner's Encyclopædia of Medicine and Surgery in all their Branches. Edited by J. KEOGH MURPHY, M.C. Cantab., F.R.C.S. Eng., Surgeon, Miller General Hospital for South-East London, and Extramural Teacher of Clinical Surgery to the London School of Clinical Medicine, &c. Second edition. London: Henry Frowde and Hodder and Stoughton. 1913. Pp. 1443. Price 35*s.* net.

THE general practitioner of to-day should have at least some acquaintance with every subject embraced in the vast, complex, and constantly increasing field of medical science, from health resorts to patent foods, from social improvement schemes to the latest operative procedure. This situation must render useful a compact practical encyclopædia of such a size and scope that in a single volume there can at once be found information, truly, simply, and clearly set forth, upon all subjects pertaining even remotely to the general practitioner's daily work. The present volume is designed to meet that need. That its utility was promptly recognised by those for whom it was designed is made evident by the fact that a second edition has been called for, and is now ready, within seven months after the appearance of the first, the first edition having been sold out even before any copies could be distributed for review.

To review the work exhaustively is obviously impossible—we must content ourselves with mentioning the scope of the contents, and leaving the reputations of the writers of the respective articles to be the guarantee of their general adequacy and accuracy. The book is divided up as follows. Part I.—I. General Medicine. II. Diseases of Children (in a series of special articles). III. Life Insurance Problems in Practice. IV. Clinical Pathology. V. Medico-Legal Points in Practice. VI. Mental Disorders in Practice. Part II.—General Surgery. I. Anæsthetics. II. Hospital Construction. III. General Surgery. Part III. Obstetrics and Gynæcology. I. Obstetrics. II. Gynæcology. Part IV.—Special Regions. I. Diseases of the Eye. II. Diseases of the Ear. III. Diseases of the Throat, Nose, and Larynx. IV. Diseases of the Skin. Part V.—Special Forms of Treatment. The contributors number no less than 160, and include such well-known names as those of Dr. Langdon Brown, Dr. R. J. M. Buchanan, Dr. Harry

Campbell, Dr. F. W. Mott, Dr. Buchanan Ker, Dr. Foord Caiger, Sir William Osler, Dr. T. J. Horder, Professor Sims Woodhead, Dr. James Mackenzie, Dr. A. F. Hertz, Dr. Wilfred Harris, Dr. Reginald Miller, Dr. Eric Pritchard, Dr. E. M. Brockbank, Dr. Edwin Smith, Sir Thomas Clouston, Dr. T. B. Hyslop, Dr. E. D. Macnamara, Dr. W. H. B. Stoddart, Dr. Robert Jones, Dr. J. Blumfeld, Sir Watson Cheyne, Mr. Sampson Handley, Mr. Hey Groves, Mr. D'Arcy Power, Mr. T. P. Legg, Mr. Bruce Clarke, Mr. A. E. Barker, Dr. J. S. Fairbairn, Dr. Blair Bell, Dr. Victor Bonney, Dr. Hastings Tweedy, Mr. Leedham Green, Dr. Comyns Berkeley, Dr. H. Jellett, Mr. H. B. Grimsdale, Mr. Willoughby Lyle, Mr. R. W. Doyne, Dr. Hunter Tod, Dr. J. H. Sequeira, Dr. Graham Little, Dr. W. J. S. Bythell, to mention only a few at random. There are also several authoritative non-medical contributors in ancillary matters. The book contains a very exhaustive general index, and also an index of treatment, as well as one referring to the quantitative prescriptions given in the text. In this second edition the addenda of the first edition have been incorporated in their place in the text, and some important additional articles have been added, including one on angina pectoris by Dr. James Mackenzie. The work should prove of great value and utility to the general practitioner.

Die Wirkungen von Arzneimitteln und Giften auf das Auge. By Dr. L. LEWIN, Professor in Berlin, and Dr. H. GUILLERY, Ophthalmic Surgeon in Cologne. Second edition. Berlin: A. Hirschwald. 1913. Two volumes. Pp. 736 and 947. Price 38 marks.

IT would appear at first sight difficult to write a book of 1683 pages on the actions of drugs and poisons on the eye, and investigation shows that the authors include in their title subjects which would not in England ordinarily be regarded as drugs or poisons. Thus 690 pages of the second volume are devoted to bacteria and moulds, and here not only such organisms as especially attack the eye are dealt with, but we find also rhinoscleroma, cholera, and so on, in addition. Again, a section of 102 pages is devoted to animal poisons, and exhaustive descriptions are given of diseases of the eye resulting from caterpillars, malaria, trypanosomes, not to mention ants, flies, wasps, worms, and scorpions. Subjects more generally designated drugs or poisons are treated in the most comprehensive manner. Commencing with inhalation narcotics, the author treats of chloroform and ether, besides supplying paragraphs on benzol, petroleum, xylol, carbon dioxide, carbon disulphide, and turpentine. Hypnotics and sedatives range from opium and chloral to œnanthe crocatum, Swainsonia galegifolia, and lupines. Then follow local anæsthetics and mydriatics, many of which have unfamiliar and awe-inspiring names. The classification is not very apt, for under substances acting upon the nervous system are placed alcohols, ethereal oils, tobacco, coffee and tea, poisons causing cramp, such as strychnine, and local miotics. Why the miotics should be thus carefully divorced from the mydriatics is not very apparent. Sections are allotted to inorganic compounds, ptomaines, blood serum, thyroid extract, cataract-producing poisons, blood poisons, irritating plants, synthetic products, antiphlogistic remedies, cardiac and renal drugs, and helminthetics. Enough has been said to show the very comprehensive nature of the work.

Even in this second edition the material is somewhat undigested and inconveniently arranged. It is essentially a compilation, though the authors record many original experiments and observations. There is an excellent index and the work will prove most useful for the purpose of reference. We have noticed some lacunæ in the literature, chiefly relating to papers by English authors, but on the whole the bibliographies are complete and up to date. We think it a mistake to have included bacteriology, since the section does not vie with Axenfeld's book, but otherwise the articles are exhaustive and thoroughly trustworthy, and the space allotted to each is well proportioned. The book fills a gap in ophthalmic literature and should be found in every good medical reference library.

Diet and Hygiene in Diseases of the Skin. By L. DUNCAN BULKLEY, A.M., M.D., Physician to the New York Skin and Cancer Hospital; Consulting Physician to the New York Hospital, and others. New York: Paul Hoeber. 1913. Pp. 194. Price $2 net.

Dr. Bulkley has studied the literature, both popular and scientific, dealing with various forms of diet, and in these lectures he records his experience of the effect of different foods in skin diseases. The various articles of diet are considered in relation to their effect on the majority of skin diseases, and on certain of such diseases in particular. In subsequent lectures the appropriate diet for certain forms of skin disease is detailed. The chief spas and mineral waters suitable in the treatment of skin diseases are mentioned, although no great stress is laid upon their superiority to a correct *régime* with water and milk. We regret that Dr. Bulkley gives none of the volumetric urinary analyses so frequently referred to in the text as having been of the greatest importance in his selection of a correct diet for the individual patient. "Fletcherism" is highly recommended, the thorough and slow mastication being useful. We note that Dr. Bulkley agrees with Sir Jonathan Hutchinson as to the spread of leprosy by eating fish, and he is enthusiastic as to the value of drinking milk, warmed to body temperature, one hour before meals. Complete directions are also given as to the non-nitrogenous rice diet which has proved so successful in the author's hands during the past six years. Chittenden's conclusions are referred to with approval, although Major McCay's recent work points to the advisability of a more generous diet.

A bibliography of both popular and scientific books on diet completes the volume. In the appendix there are tables of food values, and a vegetarian menu is drawn up for ten days. English readers will find the menu somewhat puzzling. Americans employ wheat in so many more forms than we do that the names convey nothing to an English reader. "Postum" is a drink made from a cereal; "cold slaw" is a salad made from the finely shaved heart of a cabbage; but what is "Brown Betty"?

We recommend this little book as useful in daily work. It is written by a practical physician.

General Chemistry of the Enzymes. By HANS EULER. Translated from the revised and enlarged German edition by THOMAS H. POPE. First edition. New York: John Wiley and Sons; London: Chapman and Hall, Limited. 1912. Pp. 323. Price 12*s.* 6*d.* net.

THE importance of enzymology has to be recognised when we consider how vital in many directions, as comparatively recent study has shown, are the energies of the enzymes to the interests and well-being of the human organism. It is not very long ago that the action of ferments was regarded as due to a life process, whereas now we know that they are, in the words of the author in the book before us, "animal or vegetable substances of unknown composition and constitution which in the organism itself, or even independently of the organ or cells in which they arise, are able to accelerate chemical reactions." Up to the present time there is no better definition that we know of than this. It serves to explain how unorganised ferments form an important normal mechanism of defence against bacterial invasion, inasmuch as their action is to bring

about proteolytic digestion of the bacteria. It accounts for the great industrial processes, the success of which is dependent upon the activity of yeast and diastase. It also puts into simple terms the nature of salivary, peptic, and pancreatic digestion.

The book of Professor Hans Euler was first issued in German early in 1910, and was the outcome of two reports which he wrote on modern enzymology in the *Ergebnisse der Physiologie* in 1907 and 1910. The book was revised and enlarged two years later, an undertaking which happily suggested that an English version of it ought to be produced. This suggestion was due to Mr. Thomas H. Pope, B.Sc., of the British School of Brewing, Birmingham University, who himself undertook the task, which, as the translation shows, he was admirably qualified to do. Professor Euler readily acceded to the request, and added a graceful acknowledgment that he was pleased to do so, particularly because "of the great success which has for a long time past attended enzymological research in English-speaking countries."

The book is divided into eight chapters the titles of which are given in the following order: Special Chemistry of the Enzymes, Physical Properties of the Enzymes, Activators (Co-enzymes), Paralysors and Poisons, Chemical Dynamics of Enzyme Reactions, Influence of Temperature and Radiation on Enzymic Reactions, Chemical Statics in Enzyme Reactions, Enzymic Syntheses, and Specificity of Enzyme Action.

The appendix gives tables for the estimation of sugars by Bertrand's method, and contains an index of authors and subjects. The references to literature are copious, and form a valuable feature of the book. The author classifies the enzymes in accordance with the chemical reactions induced by them, but does not attempt an enumeration of them all, since there is still a very large number the individuality of which has not been sufficiently well established. The work is authoritative and complete so far as the subject has been pursued.

The Physiology of Faith and Fear; or the Mind in Health and Disease. By WILLIAM S. SADLER, M.D., Professor of Physiologic Therapeutics in the Post-Graduate Medical School of Chicago, &c. London: Stanley Paul and Co. 1912. Pp. 580.

THE astute blends of quackery and religious emotionalism, so many of which, under the names of Christian Science, New Thought, and so forth, have come into vogue of recent years on the other side of the Atlantic, would seem to indicate that the American population must include an unusually large proportion of persons who are characterised by a specially high degree of susceptibility to suggestive influences. To protect such persons from becoming the victims of greedy charlatans is assuredly a laudable ambition, and one that should appeal with peculiar force to the physician from the fact that his daily experience can hardly fail to show him how vast a power for evil as well as for good is involved in the reaction of mental on bodily states. And if he is of an optimistic temper he is very likely to believe that this desirable end can be most certainly attained by educating public opinion, so that the average layman may have enough real knowledge to confound the sham science of the quack. This would appear to have been the idea which has inspired the author of "The Physiology of Faith and Fear," though the method by which he has pursued his aim may at times give the English reader an uneasy feeling that the process is rather like that of driving out the devil by Beelzebub.

Dr. Sadler's thesis, maintained in a very lively and popular style, is that influences of any sort which are capable of generating what he terms "faith," meaning thereby a mood of optimism, will exalt and stimulate the vital functions, while on the contrary the influences that produce "fear" or the mood of pessimism, taking the word in the widest sense, depress and retard these functions and weaken the power of resistance to disease. This view is developed by the help of some very amazing diagrams and by tabular expositions of the radically opposed action of faith and fear on each organ of the body, even to the pituitary gland. And lest the reader should lack the necessary scientific foundation for the due understanding of this doctrine, he is liberally furnished with epitomes of anatomical and physiological knowledge of an equally remarkable character. There is even a complete survey of psychology, normal and morbid, compressed into a chapter of 21 pages with two diagrams—a chapter the perusal of which gives rise to mental symptoms rather reminiscent of the digestive experiences that follow the "quick lunch." And yet, bewildering as it is at first, the author's hustling method is undoubtedly effective; and though the critical reader may think that Dr. Sadler does at times stretch to a dangerous extent the licence allowed to exponents of popular science, his protests will be tempered by the recognition that the excesses which startle him in the book are, after all, only the defects of its qualities. It is intended to brace up the nerves of the sort of persons who are naturally prone to come under the influence of what the author terms "psychic fads and fakes," and it is probably necessary for the achievement of this aim that the lesson should be conveyed in vigorous and emphatic language. Dr. Sadler uses such language freely and well, and his sound and sensible advice to neurotics is likely to be all the more telling for the racy Americanisms with which he flavours it. In matter and in phrasing it would be hard, for instance, to improve on his counsel to the chronic worrier to see to it that he has "a good job, a good fad, and a good religion."

The work may, in fact, be described in brief as an application of the philosophy of pragmatism as a therapeutic method, and the physician who is called on to draw out a regimen for a victim of "nerves" might be well advised to use it in this way, and to recommend to his patient a perusal of Dr. Sadler's tonic volume, even at the risk of seeming to countenance some strange doctrine in physiological science.

The Collected Works of Christian Fenger, M.D. London and Philadelphia: W. B. Saunders Company. 1912. Two volumes. Pp. 1050. Price 70*s.* net.

Dr. Christian Fenger, of Chicago, died in 1902, and not long after his death the Medical Society of Chicago appointed a committee to form plans for providing some kind of memorial of the surgeon. As a result the Fenger Memorial Association was formed, and a fund was collected by subscription, the income of which will be used to promote research in medical subjects. Many of Dr. Fenger's former assistants and pupils asked that his contributions to medical literature should be reprinted, and in response to this request the directors of the Fenger Memorial Association have published these volumes. All the articles which Dr. Fenger wrote have been reprinted, with only those changes which were necessary to secure a reasonable uniformity in the references and arrangement.

Dr. Fenger was born in Denmark, and he had done much good work in medicine, both in Denmark and in Egypt, before he went to Chicago; he had served as surgeon in the war between Prussia and Denmark, and also in the Franco-German war. It was not long after his arrival in Chicago that his knowledge of pathology was recognised, for at that time no pathology was taught there, and his lectures were

well attended. After a few years he entered on the practice of surgery, and he held several surgical posts of importance; ultimately, in 1899, he became professor of surgery in Rush Medical College. Dr. Fenger had a very wide reputation, both in America and Europe, and this reprinting of his writings is desirable, not only from their intrinsic value, but also as a memorial of a great surgeon. His work covered a wide range, but it was especially to the surgery of the urinary system that he had devoted his attention.

The Mayo Papers: A Collection of Papers published previous to 1909. By WILLIAM J. MAYO and CHARLES H. MAYO. 1912. Vol. I., pp. 498; Vol. II., pp. 591. Price 42*s.*

Collected Papers by the Staff of St. Mary's Hospital, Mayo Clinic, Rochester, Minnesota, 1911. London and Philadelphia: W. B. Saunders Company. 1912. Pp. 603. Price 24*s.* net.

ON a previous occasion we have had the pleasure of noticing a volume of "Collected Papers" by the staff of the well-known Mayo Clinic, and in one of the volumes before us all the papers by that staff which appeared in various periodicals during the year 1911 are brought together. In the two other volumes we find reprints of all the papers which the two Mayos had written prior to February, 1909, when the first volume of the Mayo Clinic papers commenced. Thus we have here a large collection of papers on surgical subjects emanating from the Mayo Clinic, and from this corpus of knowledge we can gather some idea of the vast amount of good work which is done there. Papers which appear in the periodical press, however much attention they may receive at the time of their appearance, run no little chance of being forgotten within a short period, and therefore there is much to be said in favour of the practice, which is growing, of reprinting them in a volume, especially those which emanate from the same medical school or hospital. Necessarily it happens that in such reprints as these, where all the papers published have been reissued, their level cannot be completely uniform, but the general level is high, and we may say that for the most part they deserve reprinting. It is a plan which might usefully be followed by other medical centres.

Medical Jurisprudence and Public Health. By G. HAXTON GIFFEN, F.R.C.S. Irel., D.P.H. Camb., and JAMES DUNDAS, M.D., D.P.H. Edin., D.T.M. Liverp., Medical Officer of Health of Ramsgate. Third edition. Edinburgh: William Bryce. 1913. Pp. 338. Price 5*s.*

THE first portion of this volume contains, in brief and concise language, the principles of forensic medicine. Each subject is discussed in a manner easy to follow, but only bare principles are laid down. No illustrative cases are given, which renders the book less interesting to read than when actual instances are quoted which have been brought before the courts. Free use is made of comparative tables, which the student will find of value before presenting himself for examination. For instance, in the section on Vital Action there are a series of such tables—Bruise Inflicted before Death; Bruise Inflicted after Death; Incised Wound Inflicted before Death; Incised Wound Inflicted after Death; and so on. The portion of the book devoted to toxicology is well worthy of praise, the different points in symptomatology, treatment, and methods of detection being lucidly and fully described. The various diagnostic questions which may arise are also discussed. Here, again, comparative tables form a conspicuous feature of the text. The chapters on public health have been rewritten for this edition, and the needs of the student preparing for the ordinary course for qualification have been kept particularly in view.

This volume will be found useful by students as supplementary to a course of lectures.

LIBRARY TABLE.

The Medical Annual. A Year-book of Treatment and Practitioner's Index, 1913. Bristol: John Wright and Sons, Limited. 1913. Pp. 871. Price 8*s.* 6*d.*—This is the thirty-first year of the appearance of this well-known annual, and the present volume fully maintains the standard of its predecessors. The Review of Therapeutic Progress is written by Dr. Frank J. Charteris, lecturer in materia medica and therapeutics, Glasgow University. He considers that the most important therapeutic advance during the period under review has been the introduction of neosalvarsan. Many of the difficulties associated with the administration of salvarsan have been removed by the introduction of a soluble salvarsan compound which forms neutral solutions. Dr. Charteris also refers to the introduction of luminal, which has a powerful hypnotic and sedative action. The names of the contributors who are responsible for the Review of Medical and Surgical Progress for 1912 form a sufficient proof that the work has been thoroughly and efficiently carried out. A particularly interesting article by Mr. C. Thurstan Holland appears on radio-activity and electrotherapeutics. He is of opinion that, whilst no great advance has taken place during the past year in X ray work or in the application of electricity to treatment, advance has been done in improving technique and in many additions to the diagnostic value of radiography, more especially in gastric and intestinal conditions. Mr. C. A. Clark publishes some good stereoscopic radiographs illustrating the value of the X rays in the diagnosis of oral sepsis. The illustrations and reproductions of photographs throughout the volume are excellently carried out, and considerably add to the value of the letterpress.

A Hospital in the Making. By B. BURFORD RAWLINGS. London: Sir Isaac Pitman and Sons, Limited. 1913. Pp. 271. Price 5*s.* net.—The hospital of which the history is here given is the National Hospital for the Paralysed and Epileptic, Queen-square. Instituted in 1859, it was greatly enlarged in 1884 as a memorial to the late Duke of Albany. Begun in faith by the Misses Louisa and Joanna Chandler, together with their brother Edward, who out of their own scanty resources contributed £200 as a nucleus fund, it grew from the smallest beginnings to the world-famed institution which it now is. Suffering and the relief thereof unite humanity in all ages as nothing else can do, and the history of any hospital—one for the study, care, and relief of nervous diseases, perhaps, more than all—is curiously reminiscent of the well-known passage of Hooker on the Psalms, which he in turn derived from Torquemada the Dominican. Herein, he says, are to be found: "Heroical magnanimity, exquisite justice, grave moderation, exact wisdom, unwearied patience. ..... Let there be any grief or disease ..... any wound or sickness named for which there is not in this treasure house a present comfortable remedy at all times ready to be found." Hospitals, however, are not exempt from the weaknesses incident to other human institutions, and the Queen-square hospital, as our readers may remember, has had its share of troubles. Mr. Rawlings naturally had to make some reference to the events of 1899 and the following years. If his remarks are written mainly from his own point of view, that is only to be expected from one who was a protagonist in the stormy period under review. He puts his opinions fairly and squarely before the reader, and it is easy to see that he has been influenced by no

merely personal motive in thus reviving memories painful. Our opinions do not agree with his, but he has a perfect right to his view.

Text-book of Massage and Swedish Gymnastics and other Exercises for Masseuses and Nurses. By THOMAS D. LUKE, M.D. R.U.I., F.R.C.S. Edin. Illustrated. London: The Scientific Press, Limited. 1913. Pp. 108. Price 2*s.* 6*d.* net.—This little book, the matter of which was first published in the form of lectures in the *Nursing Mirror*, is now produced with additions, improvements, and illustrations. It deals in a simple and clear way with the general principles and technique of massage for medical and æsthetic purposes and in the treatment of fractures. It includes chapters on medical gymnastic, and Swedish exercises, Frenkel's exercises for locomotor ataxia, the Schott-Nauheim system for heart disease, methods of artificial respiration, and exercises which may be used in the treatment of lateral curvature of the spine and flat-foot. It will be seen that the field is very wide, and as a large part of the space is taken up with illustrations, only the most concise and elementary facts find room in the text. It is nevertheless sufficient for all practical purposes, and ought to prove useful to the general practitioner as well as the nurses for whom it is written. The principles which underlie the use of massage in medicine and the proper place of exercises in surgery are explained. The descriptions of the exercises are as clear as they can be made in writing, and the figures afford some help to the reader, but references are absent in the text. The author's short description of Frenkel's system is sufficient to enable any medical man or nurse to apply it to a case under his care and bring a little hope and joy into a life which is often mainly miserable. His warning that in locomotor ataxia the sense of fatigue is sometimes lost ought to prevent any overtaxing of these patients.

"Verb. Sap." on Going to West Africa, Northern and Southern Nigeria, and to the Coasts. By Captain ALAN FIELD, F.R.G.S. Third edition. London: Bale, Sons, and Danielsson, Limited. 1913. Pp. 251. Price 2*s.* 6*d.* net.—As its title implies, this book is intended to be of use to the new adventurer to the West Coast of Africa. Chapter I. deals with outfit and estimates. We can endorse the author's remarks about not buying second-hand stuff. A good outfit at starting may make all the difference between a comfortable existence and a successful career, or failure, and perhaps death. The lists given are very exhaustive, and there is small chance if they are gone through in detail of omitting anything of importance, though, of course, not all the items mentioned are necessary for everyone. Judgment and discretion must be used in the selection. After an entertaining description of the journey from Liverpool along the coast and a sound chapter on the health, climate and seasons, Captain Field has a sensible word to say on social amenities. We particularly commend his reprobation of "slackness" as regards the decencies of life and its consequences with regard to one's fellows and the natives. The languages of the Nigerias and the coast colonies are discussed, and much historical, statistical, and general information is given. Unlike some travellers, the author has a good word for the civilising effects of missions when they are conducted on broad-gauge lines and not in a narrow spirit. The book is entertainingly written, and obviously from a wide practical experience. It contains an admirable portrait of the late Sir Alfred Jones, K.C.M.G., to whom "the Coast" as well as tropical medicine is deeply indebted, and also a trenchant preface from his pen, a map by the author, and a copious index. It will be valuable to all about to journey to the West Coast for whatever reason.

JOURNALS AND MAGAZINES.

Quarterly Journal of Experimental Physiology. Editors: Sir E. A. SCHÄFER, F. GOTCH, W. D. HALLIBURTON, C. S. SHERRINGTON, E. H. STARLING, and A. D. WALLER. Vol. VI., No. 2. April, 1913. London: Charles Griffin and Co., Limited. Pp. 109–207. Price 7*s.* 6*d.*—The Effect of Thyroid Extirpation on the Hypophysis Cerebri in the Rabbit. Lyda May Degener removed completely the glands in 12 adult rabbits and killed them by coal gas at periods varying from 10 to 179 days after the operation. The hypophysis when weighed after death were found to be distinctly heavier than in control animals; and the increase in weight appears to run parallel with the time between thyroidectomy and the death of the animal. After six months the pituitary body had increased to about three times the normal size.—Age as a Factor in the Effects of Thyroidectomy and Thyro-Parathyroidectomy in the Sheep. Sutherland Simpson finds from his experimenents that the thyroid and parathyroid play a much more important rôle in the young lamb than in the adult sheep. Removal of the thyroid and the contained internal parathyroids in 13 adult sheep and 16 lambs from seven to eight months old led to practically no ill effects. A similar operation on three lambs about two months old made them typical cretins. Complete thyro-parathyroidectomy in four adult sheep was followed by no symptoms during the time of observation (3–4 months), but the same operation in young lambs (5–7 weeks) resulted early in acute and fatal tetany. Removal of the two external parathyroids from the three cretins when about one year old was followed by only slight symptoms. Age is, therefore, a very important factor.—On the Reflex Nature of Apnœa in the Duck in Diving: (*a*) Submersion Apnœa; (*b*) Reflex Postural Apnœa; (*c*) Resistance to Asphyxia in Diving, by Frances M. Huxley. These are three separate papers, but they all bear on the same subject. Mere submergence of a duck's head in water produces instantaneously, at whatever stage of respiration the act is performed, a reflex cessation of breathing. Submersion of the entire head is required for complete arrest of breathing. When, however, a duck submerges its own head other reflexes appear which add to this and make the condition much more pronounced. As to postural apnœa, it appears that in whatever position the body of a normal duck be placed, it so arranges the curves of the neck that the dorsal surface of the head faces in an upward direction. In all these postures breathing continues. When, however, the duck's body is placed in the diving position, the head and neck fall into line with it, and breathing ceases. The relation of the labyrinth to postural apnœa is discussed. Slowing of the heart and apnœa aid the duck in resisting asphxia from submersion, because oxygen is spared by the decreased metabolism of the heart and respiratory muscles, and by the absence of mechanical circulation of air in the respiratory tract.—Dr. D. Noël Paton discusses, and gives experiments to show, the relative influence of the labyrinthine and cervical elements in the production of postural apnœa in the duck.—B. R. Macmillan gives an account of an Improved Form of Electrical Drop Recorder.

The Journal of Physiology. Edited by J. N. LANGLEY, D.Sc., F.R.S. Vol. XLVI., No. 2. April, 1913. London: C. F. Clay; Cambridge University Press. Pp. 81–172. Price 5*s.* 6*d.*—Calorimetric Experiments on Warm-blooded Animals, by A. V. Hill and A. M. Hill, is a highly technical paper in which the authors give a description of an automatic self-registering respiration calorimeter for small warm-blooded animals, by the use of which they claim that it is possible to estimate within about 2 per cent. the total heat

liberated by the animals. Observations are recorded showing the heat-production of rats, cats, and other animals under varying conditions.—The Reaction between Metallic Salts and the Soluble Carbonates and its Bearing upon the Precipitation of Proteins, by W. Nevill Heard, a purely physico-chemical paper on the important question of precipitation of proteins.—Dorothy Dale's observations on the Action of Electrolytes on Paramœcium were undertaken to define the limits of hydrogen ion concentration between which P. aurelia can carry on its normal movements.—In a paper on the Distribution of Nerves in the Heart Winifred Cullis, D.Sc., and Enid M. Tribe, B.Sc., set out to determine the distribution of nerves in the mammalian heart, particularly with regard to the presence or absence of vagus and sympathetic fibres in the ventricle. The method adopted was to stimulate the cardiac nerves in the saline-perfused organ—mainly the heart of rabbits, but sometimes of cats—before and after section of the auriculo-ventricular bundle. The rabbit was pithed and the heart perfused with Locke's fluid and left in the body, and the beats of the auricle and ventricle were recorded separately under different conditions of stimulation. As is known, vagal stimulation produces no effect upon the ventricle after section of the *a.-v.* bundle. Various drugs were used to determine the existence of vagus and sympathetic fibres in the ventricular muscle—e.g., pilocarpine, muscarine, atropine, adrenalin. They record that after section of the *a.-v.* bundle pilocarpine and muscarine did not produce their normal slowing and inhibitory action upon the ventricles, though they acted normally upon the auricles; atropine following these drugs abolished their action upon the auricles, but produced no effects upon the ventricles. Under similar conditions adrenalin still produced its normal effects upon the ventricles. These results lead the authors to conclude that: (1) the ventricle does not receive vagus fibres, and therefore that the normal action of the vagus upon the ventricle is an indirect one; (2) the ventricle is abundantly supplied with sympathetic fibres, which do not pass in only by way of the *a.-v.* bundle. The observations of Constance Leetham, in a paper on the Action of Certain Drugs on Isolated Strips of Ventricles support the foregoing conclusions.—The paper by J. Mellanby and V. J. Woolley on the Ferments of the Pancreas, Part II., The Action of Calcium Salts on the Generation of Trypsin from Trypsinogen, also is a highly technical paper. The authors conclude that calcium salts cannot generate trypsin from trypsinogen. The activating influence which they appear to exert is due to their providing a more favourable medium for the action of the enterokinase already contained in the pancreatic juice. All specimens of pancreatic juice contain variable quantities of enterokinase. Salts of barium and strontium can activate pancreatic juice as effectively as salts of calcium. Whatever agent neutralises the alkalinity of pancreatic juice and does not destroy the trypsinogen, that agent produces rapid activation.

ROYAL SOCIETY OF MEDICINE: SECTION OF BALNEOLOGY AND CLIMATOLOGY.—The annual provincial meeting of this section was held at Bournemouth on May 31st, the President, Dr. Percy G. Lewis (Folkestone), being in the chair. Mr. A. G. S. Mahomed (Bournemouth) demonstrated by means of an apparatus he had constructed the differing dielectric capacities of Purbeck stone, chalk, and sand. Assuming that negative ions were given off by metals in a glowing state in the under crust, he surmised that the dielectric properties of the earth crust would cause an induced positive charge in the atmosphere. He also showed charts on which the varying potential was exhibited when passing from gravels and sand to chalk, and *vice versâ*. Dr. Leonard Williams proposed, and Dr. F. H. Humphris seconded, a vote of thanks to Mr. Mahomed.

Reports and Analytical Records FROM THE LANCET LABORATORY.

PROPAESIN.

(B. KÜHN AND CO., 16, ROOD-LANE, EASTCHEAP, LONDON, E.C.)

A SERIES of preparations acting as local anæsthetics and offered as non-toxic substitutes for cocaine has been before our readers for some time. The latest addition to the list secures the advantage of the propyl group in its structure. Propaesin is the recently prepared salt, which is described as the propyl ester of para-amido-benzoic-acid. It is thus grouped like anæsthesin, which is the ethyl ester of the same acid, while orthoform is the methyl ester of meta-amido-para-oxy-benzoic acid. The higher alcohol, propyl alcohol, was chosen as the parent group of this new anæsthetic inasmuch as the alcohol itself has anæsthetic properties. Experiments made with this new compound appear to justify anticipations, for, according to a number of experiments recorded in German clinics, good local anæsthetic results are obtained without any undesirable by-effects, amongst which may be mentioned vomiting, urticaria, and renal disturbance. It is reported, however, that in the case of cachectic tuberculous patients complaints were made of an unpleasant feeling in the throat. Propaesin is a white crystalline powder, slightly soluble in water, but easily soluble in alcohol and ether. It exhibits a neutral reaction and is without taste or smell. Its local anæsthetic action is soon produced. It is prepared in the form of an ointment for external application, and in the form of tablets, powders, suppositories, and urethral pencils for internal administration. The tablets appear to be useful in laryngitis and in gastric pain.

"PHYLACOGENS."

(PARKE, DAVIS, AND COMPANY, BEAK-STREET, REGENT-STREET, LONDON, W.)

The term "phylacogens" is applied to a series of sterile aqueous solutions of modified bacterial derivatives. We have received specimens as follows: gonorrhœa, erysipelas, rheumatism, pneumonia, and mixed infection. In the preparation of phylacogens the bacteria are first killed and then removed by filtration through porcelain. They are thus sterile aqueous solutions of metabolic substances or derivatives generated by bacteria grown in artificial media. The principle upon which the use of these phylacogens is founded is the theory of multiple infections. According to its originator, Dr. A. F. Schafer, of Bakersfield, California, this new therapy rests on three considerations—(1) that practically all acute and many of the chronic diseases are caused by the metabolic products of bacteria; (2) that the human subject is the host of micro-organisms that are pathologically latent but capable of setting up a disease process under certain conditions; and (3) that the growth of infecting micro-organisms can be arrested and their effects neutralised by products derived from their development in artificial culture media. The method of treatment suggested has been submitted to considerable clinical observation in the United States and particularly in California, and the results are stated to be very remarkable "both in the recovery of apparently hopeless cases and in the shortening of the duration of ordinary cases." The preparation of the "phylacogens" has now been undertaken by Messrs. Parke, Davis, and Co., and opportunity is being given to make extended trial of the treatment in this country.

OLIVE OIL.

(J. ESTEVEZ AND CO., 41, CRUTCHED FRIARS, LONDON, E.C.)

This specimen of olive oil has been produced, it is stated, in the celebrated olive district round Cordova and Seville in

Spain. The sample exhibited a brilliant yellowish-green colour. There was no suggestion of a rancid flavour to the palate, and analysis disclosed in confirmation of this a quite small degree of acidity. Olive oil is, of course, liable to adulteration, but there are, fortunately, means of distinguishing the genuine from the spurious article. According to a number of tests which we made this oil gave figures agreeing with those yielded by the standard article. The specific gravity, for example, was 0·915. Its iodine absorption figure was exactly 80, and the rise of temperature given on mixing a definite weight with a measured amount of strong sulphuric acid (Maumené's test) was 40° C. These figures are in complete accordance with those given by known samples of the genuine oil. The free acidity, calculated as oleic acid, amounted to 0·94 per cent., which is below the average usually found. The conclusion is therefore justified that the oil is well adapted, not only for culinary, but for medicinal purposes also.

BRONAMALT.

(FLETCHER, FLETCHER AND CO., LIMITED, THANE-ROAD, HOLLOWAY, LONDON, N.)

Some years ago we reported upon this preparation which was then known as Vibrona Malt. It is now issued under the name of Bronamalt, and we have had an opportunity of submitting it to analysis, the results of which show that it preserves a uniform quality. It is a liquid malt preparation containing the hydrobromic acid extractives of cinchona bark. We had no difficulty in separating the alkaloids indicated, and proof was further obtained of their occurring in the form of hydrobromates. The preparation, for example, on evaporation with alkali and burning to an ash gave a mineral residue which yielded free bromine on suitable treatment. Some importance is attached to the use of hydrobromic acid for the purpose, inasmuch as the hydrobromates of the alkaloids are said to be free from the effects known as "cinchonism." According to our experiments the malt extract used is a very active one, since we found that 1 part of bronamalt digests completely in one hour at blood heat 15 times its weight of starch. There is no objection to the flavour of the preparation, the malt extract appearing to cover the bitterness of the cinchona principles. The alcohol amounted to 11·17 per cent. by volume.

EMPIRE STOUT.

(JAMES ALDERSON AND CO., LIMITED, BURNLEY-ROAD, HALIFAX.)

Some care has been bestowed on the brewing of this malt liquor with the view of obtaining a maximum of the nutritive extractives of the malt employed and of keeping the alcoholic strength as low as possible. According to our analysis the total malt extractives amounted to 6·74 per cent., and these contained dextrin, 3·89 per cent.; malt sugar, 1·86 per cent.; proteins, 0·47 per cent.; and mineral matter, 0·24 per cent. (chiefly potassium phosphate). The alcohol was not particularly high, having regard to the strength of many stouts we have examined. It was 5·00 per cent. by weight. The stout was in sound condition, showing a volatile acidity reckoned as acetic acid of only 0·096 per cent. The fixed acidity calculated as lactic acid amounted to 0·279 per cent. The flavour was smooth and free from any pronounced acid quality.

ANONYMOUS GIFT TO THE LONDON HOSPITAL.—A few days ago a paper parcel addressed to the secretary of the London Hospital was found by him on his private desk. On cutting the string of the package £10,000 bearer bonds were disclosed, but there was no indication as to the identification of the mysterious donor.

THE SEVENTEENTH INTERNATIONAL CONGRESS OF MEDICINE (1913).

THE NATIONAL HUNGARIAN COMMITTEE.

A SITTING was held in Budapest by the National Hungarian Committee of the Seventeenth International Medical Congress on May 30th. The President of the committee, Professor DE GRÓSZ, took the chair.

About 150 Hungarian doctors have subscribed as members. The Hungarian Government has named official delegates, and a subcommittee will make their proposals for the distribution of the Moscow prize (5000 francs), the Paris prize (4000 francs), and the Hungary prize (3000 kronen).

SUBSECTION OF CHEMICAL PATHOLOGY.

The subsection of Chemical Pathology has been constituted this year for the first time as a separate section apart from the Section of General Pathology. The subsection will meet under the Presidency of Dr. F. Gowland Hopkins, F.R.S. The meetings will be held in the Mechanical Theatre of the Royal College of Science, South Kensington. The mornings will be devoted to the discussion of selected subjects, each of which will be introduced by the authorities on these subjects mentioned below, after which they will be open for general discussion. On Thursday, August 7th, the subject for the morning discussion will be the Pathological Conditions due to Defects of Diet. The discussion will be opened by the President of the subsection, who will be followed by Dr. H. Schaumann, of Hamburg. On Friday, August 8th, a joint discussion will be held with the Section of Bacteriology and Immunity on the subject of Cancer, the chemical aspects of which will be discussed by Professor Carl Neuberg, of Berlin, and Dr. E. Freund, of Vienna. On Saturday, August 9th, the subject will be the Clinical Applications of Pathological Chemistry. The discussion will be opened by Professor Otto Folin, of Boston, U.S.A., and Dr. A. E. Garrod, of London. On Monday, August 11th, Professor Otto Cohnheim, of Heidelberg, will open a discussion on the Chemical Pathology of the Alimentary Tract. Dr. G. Barger, of London, will be the second speaker. On Tuesday, August 12th, a joint discussion will be held with the Section of Physiology on the subject of the Endogenous Metabolism of Proteins. Dr. E. Abderhalden, of Halle, and Dr. H. Dakin, of New York, will act as reporters on this subject.

The discussion on the subject of the Clinical Applications of Pathological Chemistry will, it is hoped, draw a large audience, especially of those whose interests are not immediately concerned with the subject of pathological chemistry, as the discussion is intended to bring forward the many points in which chemical investigations have the most important bearing on diagnosis and treatment. The joint discussions also with the Sections of Immunity and Physiology will be of especial interest, as the subjects under discussion, Cancer and the Endogenous Metabolism of Proteins respectively, will be approached from different points of view by the representatives of the respective sections

The afternoons will be given up to the reading and discussion of independent papers. The number of papers at present submitted by English authors are few, further papers will therefore be acceptable. The titles must be sent as soon as possible to the central office. Among the subjects treated in the papers already received are the following: The Recognition of Pancreatic Insufficiency, the Ferments of the Gastric Juice in Carcinoma of the Stomach, the Action of Light on Animal Chemistry, the Ferments of the Blood in Normal and Pathological Conditions, Sulphæmoglobinæmia, and others.

As regards sectional entertainments nothing is at present definitely arranged, but it is proposed to have a sectional dinner, the date of which is to be arranged.

A museum subcommittee has been formed for the purpose of arranging for exhibits of interest from the point of view of pathological chemistry, under the presidency of Professor Walker Hall. Dr. H. Maclean is the acting secretary. The exhibits will be shown in the General Museum. Dr. G. Barger has undertaken the duties of editor of the Transactions of the section. As the subsection is but newly created it is to be hoped that it may obtain success by being well supported by members of the Congress in its discussions and papers.

The secretary of the section is Dr. J. F. Gaskell, 23, Ladbroke Grove, W.

THE LANCET.

LONDON: SATURDAY, JUNE 14, 1913.

The National Insurance Act.

ALTHOUGH an amending Bill to the National Insurance Act is promised by the Government for the near future, there are at present no indications that this will include any substantial proposals for removing medical objections to the Act. It is not indeed certain that any amendment of the purely medical portions of the Act is contemplated. The probability is that the amending measure will deal mainly, if not exclusively, with other problems than those which directly concern our profession. Nevertheless, until their aim and scope are defined, the contemplated changes may reasonably be regarded as something through which the position of the 18,000 or 19,000 medical practitioners on the panel could be improved; and while the amendments are passing into law there ought to be opportunities for the relief of the more pressing medical needs which have become apparent during the first six months of the administration of medical benefit.

The main question for the medical profession to consider at the present moment is the means by which better conditions of service should be sought, whether through amending legislation or through revised Regulations. The Insurance Commissioners were given very wide powers by the Act, and within certain limits it is permissible for them at any time to alter or recast the Regulations which they themselves have made for the administration of medical benefit. They cannot go beyond the terms of the Act, and they cannot obtain more money on their own initiative; otherwise it would seem that their authority is supreme. So far they have shown themselves not unmindful of medical interests, and it might be bad policy for the medical profession to press for advantages under an amending Act which could be obtained by amended Regulations. The important point is to decide now what are the things which we can hope to secure from the Government through the forthcoming measure, and which it is beyond the power of the Commissioners to grant already within the four corners of the existing Act. Recognising that improved conditions of medical service are to be looked for, not only by amendment of the Act but also by amendment of the Regulations, the British Medical Association has lately forwarded to the National Insurance Joint Committee a memorandum containing suggestions for improving the efficiency of the Act which could be adopted in some instances only by fresh legislation, and in others through the powers already vested in the Commissioners. The points which the British Medical Association has brought to the notice of the Commissioners and the Government have all been openly discussed in our columns and elsewhere. The Association asks that certain services should be excluded from medical benefit—viz., the provision of a second practitioner without extra payment, attendance on insured persons for diseases caused by their own misconduct, cases of miscarriage, and abortion. The Association maintains that attendance on cases which require assistance—for example, for the administration of an anæsthetic—should be paid for separately; the service of the second practitioner should not be regarded as part of ordinary medical benefit either to be obtained gratuitously or to be paid for by the medical man who wants the assistance. The Association also urges that a small extra charge should be enforceable in respect of night calls; that Insurance Committees should be required, and not merely permitted as at present, to adopt a local income limit; that in Insurance Committees no one interest should form more than two-fifths of the total membership; that the medical profession should have effective representation on district committees and on the committee of the Seamen's National Insurance Society; that additional provision should be made for a special fund to pay for the treatment of insured persons temporarily absent from home through ill-health; that the terms of medical practitioners' agreements with Insurance Committees should be submitted to the Local Medical Committees for their consideration; that the term "rural area" in Regulation 30 (1) should be defined or deleted; and, finally, that medical referees, with reasonable security of tenure of office, should be appointed by the Commissioners, to whom cases of alleged malingering could be referred.

These suggested amendments cannot be called grasping or unreasonable, and the precaution has been taken of submitting them in the first instance to the Insurance Commissioners with a view to securing for them the approval and support of that body. This is a conciliatory attitude which it is to be hoped will yield practical result. The claim that the payment for the services of a second practitioner for the administration of an anæsthetic should not fall upon the panel practioner is one that has already been put forward emphatically by the General Medical Council, and the British Medical Association is right in pressing for amendment of the Act or Regulations in this respect. With regard to the income limit, the memorandum of the Association points out that the fear of the medical profession that Section 15 (3) of the Act, which authorises Insurance Committees to fix a local income limit, would be more honoured in the breach than in the observance has been justified by the experience of the past few months. The obvious remedy for this long-foreseen state of affairs could, of course, only be applied through an amending Act, for no Regulation can make obligatory what the Act has merely made optional on the part of Insurance Committees. But it is at least improbable that the Government will at the present time introduce a clause into an amending Bill which if carried would have the effect of reversing the spirit of Section 15 (3) of the National Insurance Act. To yield on this controversial point would scarcely add to the popularity of the Act or of the Government which passed it. For like reasons it may be assumed that the Government will not readily adopt any suggestion for weakening the representation of insured persons upon Insurance Committees.

Breast Feeding.

IT is the experience of most practitioners that there is an increasing tendency among the mothers of the upper classes in this country to substitute artificial feeding for the natural breast feeding of their infants. That this practice is attended by serious drawbacks is generally admitted, and it is common knowledge that the breast-fed baby is healthier, happier, gains in weight more regularly and to a greater extent, and enjoys a more placid existence than its fellow brought up on artificial food. The tendency to substitute bottle feeding for breast feeding is not prevalent to any great extent among the poorer classes; indeed, they are driven by the expense attached to the provision of cow's milk to persevere with breast feeding often in unfavourable circumstances and long after it should have been given up. In a practical and interesting paper in the present issue of THE LANCET (p. 1657) Mrs. LUCY NAISH calls attention to some of the causes which lead in many instances both the mother and the nurse to abandon the attempt to feed the baby on the breast and to fall back upon artificial feeding. A common mistake which she points out is the idea that the baby's crying during the first two or three days of life necessarily signifies that it is hungry. This is in most instances not the case, and much mischief is done by the attempts which are so frequently made even by intelligent nurses to provide the baby with artificial food before the secretion of the breast milk is established. The fact that it is very troublesome to persuade many babies to suck properly, even when the supply of milk is well established, is no doubt frequently the cause of the premature cessation of breast feeding. The refusal of a baby to suck, even when the mother's nipples are well formed, is a condition requiring a good deal of perseverance on the part of both the mother and the nurse, but with the exhibition of patience it can generally be overcome. The foolish practice of attempting to harden the nipples before parturition by alcoholic and other astringent lotions—a method advocated even at the present time by many authors—is answerable for a great deal of the pain which is suffered in the early days of lactation by young mothers, whom it is a difficult task to persuade that the discomfort to themselves is worth enduring, and that the condition is one which care and time will surely heal. New-born babies are easily trained to habits of regularity in the matter of their feeds, and this should always be carefully practised by the nursing mother.

There are many facts with regard to the secretion of the breast of which we are profoundly ignorant; for example, we have no knowledge of any drug which will influence the secretion of the milk, we know not why on one occasion a child will obtain a large amount of milk from the breast while at the next feed perhaps only a quarter of this amount or even a less quantity is taken. In a series of observations carried out by Dr. DAVID FORSYTH (see p. 1656) he has shown that there is no evidence of the existence of any diurnal cycle of activity of the mammary glands. The fact that the child takes in many cases no longer over a large meal than a scanty one would seem to show that at one time the supply of milk is more abundant than at another. He comes to the conclusion that the secretion of the milk, although no doubt increasing *pari passu* to some extent with the growth of the child, yet varies from day to day, and even from hour to hour, under the influence of maternal factors. But what these are and how they are controlled we have no evidence to guide us. His observations carried out on an infant of the better class from the fifth to the forty-ninth day show very marked and interesting variations, more particularly in the size of the individual feeds, in the daily amount of the milk, and in the total amount consumed week by week. It is certainly very surprising to find a child in only the second week of its life obtaining a feed of as much as four and a half ounces, and then on another occasion during the same week one consisting of only a quarter of an ounce. Another interesting fact brought out by these observations is that the same breast, even after equal periods of rest, yields very unequal quantities of secretion. Indeed, the fallacy of attempting to estimate the total amount of milk secreted in the day from the measurement of one feed is well demonstrated by Dr. FORSYTH. In this connexion the dictum of Dr. VARIOT, quoted by Dr. D. H. D. CRAN in a paper upon Dr. VARIOT'S methods (see p. 1659), is of much interest: "Let the child on the breast drink according to its appetite." This appears to be such a self-evident proposition that we should expect it to meet with general assent. Apparently, however, it is contrary to current French teaching. For some years now obstetricians in France have laid down the rule that the amount of milk the child obtains from the breast should be as strictly regulated as if it were an artificial feed in a bottle. The mother is to weigh the child before and after giving it the breast, so that it may receive the prescribed amount of milk, no more and no less. Many supposed evils are put down to overfeeding, and in order to avoid these the mother is recommended to weigh her child frequently, and if it is found to be getting too much the length of time it is allowed to suck is strictly curtailed. If we may believe Dr. VARIOT, this practice leads directly to the very evils it is intended to avoid. It would seem that the practice of giving a definite amount of milk at such feeds—namely, some 100 grm. per kilo. of body weight in the 24 hours—has become a widespread rule. According to Dr. VARIOT, during the past few years a large number of infants brought up in this way have presented various disorders directly attributable to what he terms hypoalimentation, or, in other words, they have suffered from chronic hunger. He maintains that the ration of 100 grm. per kilo. of body weight is too small, and adduces in favour of his view the results obtained in the feeding of the children in the Hospice des Enfants Assistés. These children, he points out, are generally overfed rather than underfed, and are frequently given both breasts at one feed, yet they thrive well and present a low death-rate. Observations on the amount of milk obtained by such children at any one meal tend to show that it may vary from as much as 1/6 to 1/2 of the body weight during the 24 hours.

It is probable that one, at any rate, of the chief causes of the decline in the number of young mothers who at the present day nurse their babies is not that they are unable but that they are unwilling to suckle. They have not the

strength of will to endure the minor discomforts often associated with the early stages of lactation, nor are they sufficiently unselfish to devote the time that is required and to give up other more pleasing occupations for the sake of their children. In only too many cases unhappily they find a ready acquiescence in this decision on the part both of their husbands and of their nurses. In the rush of modern life and in the ceaseless pursuit of excitement and enjoyment the young mother will not be bothered with the trouble of nursing her baby and condemns it unhesitatingly to all the trials of artificial feeding. For our part we are strongly of opinion that breast feeding is the only really satisfactory method of feeding young infants, provided of course that the mother is able to play her part. We further agree with Dr. VARIOT, that no hard-and-fast rules can be laid down as to the exact amount of food to be taken by any particular baby at any one meal or during the 24 hours. The practice which is so often followed of weighing babies every day or every other day is unnecessary in the case of a healthy child, and may lead to needless anxiety on the part of the mother who does not appreciate the unimportance of the daily variations in the weight of even a thriving baby. The increasing tendency of the young mother of the present age not to suckle her child, combined with the spread of the practice of the limitation of the number of the children in the family, are menaces to the welfare both of the individual and of the nation which cannot fail to bring in their train a heavy retribution.

The Cost of Medical Research.

AT the opening of the new buildings of the medical and dental school in connexion with Guy's Hospital Mr. BALFOUR delivered an address on the cost of medical research and the need for its endowment, which was marked with the lucidity and grace that always characterise his important public utterances. He insisted on the demand made by modern civilisation for continued scientific research, and showed the necessity, arising therefrom, to secure for the work of research men whose investigations should not only be carried on with industry, accuracy, and practical result, but should be stamped with genius—that indefinable blend of imagination and logic which dictates with sureness the route to be taken over uncharted lands. No one has ever put the case more forcibly before laymen of the actual debt that is owed by the community at large to those who carry on the work of medical research, or showed more eloquently that their occupation can only in the rarest cases be directly remunerative to themselves, although their labours eventuate in incalculable public gain, not only in health and happiness but in actual money. For the increased efficiency with which the scheme of the world can be run when wholesome and sanitary conditions are provided means an economy that is equivalent to undreamt of wealth. Beside such wealth the cost of medical research is as nothing, and yet this cost is becoming a source of the profoundest anxiety to those who have to provide for the machinery of research work, its facilities and its amenities. The public, which reaps the benefit, realises only in a small proportion of instances the necessity for the expenditure, and seldom feels it a personal matter that a great deal of medical investigation is conducted by inadequately paid persons who, honoured as they may be by the esteem of those who can appreciate their labours, receive salaries which in commercial and financial circles would be thought contemptible, and which compare very badly with official payments inasmuch as they carry with them no pensions or allowances. The altruism of these men is lost sight of, and their work is neglected by the public until some particularly striking and immediate benefit can be proved to be its derivative.

To some extent this is all in the nature of things; especially is it impossible for the pioneers of medical research to keep the public informed from day to day of their exploits and their hopes. But the general meaning of the enormous extension which medicine has undergone of late is not difficult to follow—we are experiencing a great scientific synthesis. When we realise this it becomes easy to see that the cost to those bodies, universities, colleges, and medical, special and secondary schools, on whom the expense of providing medical education devolves, must automatically increase. This situation was put before the public by Mr. BALFOUR while asking for a more generous endowment of medical research. He showed that the main reason for the increased cost of medical education proper and of the research work which goes hand in hand with it, or lies beyond it, or clears the ground for its progress, is the enormous extension of the territory over which medicine now extends its sway. It is impossible to say how far medicine is required to keep in touch not only with biology and chemistry, but with physics, mathematics, and psychology, while the last science is itself rapidly passing from one of abstract philosophy to one of practical work in schools and laboratories. As a consequence a medical school, like that attached to Guy's Hospital, which aspires to represent modern medicine in all its features must be prepared to deal largely with collateral sciences, must provide its students with workrooms well stored with expensive apparatus, and, most important of all, must enlist the services of teachers of a special type, who shall not only be capable of giving the practical and academic instruction necessary for the student in his professional curriculum, but of carrying on research work along the various tracks which their splendid opportunities indicate to them, or through the unknown regions which their genius inspires them to prospect. "The amount of knowledge," said Mr. BALFOUR, "expected from teachers and specialists has grown until I wonder how it is possible for any physician with a great practice to keep himself abreast of what is being done by researchers of all countries who are engaged in a rivalry for the furtherance of knowledge, a rivalry far happier than that of armaments but hardly less expensive." The answer to the question implied in this apt phrase is that the physician or surgeon can only be so informed through the work done in laboratories for medical research. No amount of work in any laboratory can replace general knowledge of medicine, or special skill acquired by clinical experience, or familiarity with human nature. These qualities in their several amounts warrant the efficiency of the

practitioner; but it must be remembered that medical practice, however learned the hands in which it lies, becomes empiricism when not informed by the lessons of science. Therefore, alongside with our practice in every branch there must be facilities for medical research, and these, which are very expensive, must be paid for.

It is the truth that in this country money is more readily found to endow the taught than the teacher. The income of a brilliant student, not by the way necessarily dependent upon his prize money or scholarships, may amount to as much as the salary of many of the lecturers and readers who instruct him; this is not a singular case, and as a matter of fact is perhaps commoner in other educational circles than those connected with medicine. We would not say a word against the generosity that has provided and is providing such incentives to industry. Whether the highly endowed student is always worth what he has earned by industry, precocity, or both, is a small matter—the important thing is that were it not for these scholarships the material for teachers would steadily shrink. For teachers are drawn from the scholarship class, and whether they have been properly rewarded or not while *in statu pupillari*, as teachers they will find themselves ill-paid, and as discoverers hardly paid at all. Therefore we are extremely glad that Mr. BALFOUR should have taken the excellent opportunity given by the recent proceedings at Guy's Hospital to point out that something of the security which the successful exhibitioner possesses should also be enjoyed by those who, in our modern scheme of medical organisation, are pursuing the work of medical research. "Men must live," said Mr. BALFOUR; "they cannot be asked to give up their domestic life, their incomes, and their security. And if a man fitted for research is to exercise his gift he must be provided with a position in which he can feel that he is not sacrificing the interests of those nearest and dearest to him in the pursuit and advancement of new knowledge." Quite so, and this has just been recognised by the Rockefeller Institute in the United States, where some provision of pensions for the workers is now an accomplished fact.

Annotations.

"Ne quid nimis."

THE MENTAL DEFICIENCY BILL.

ON May 28th Mr. McKenna, the Home Secretary, in moving the second reading of the Mental Deficiency Bill, which was so unfortunately, and indeed deplorably, dropped from the Government programme last year, pointed out that in the present measure changes had been made in recognition of the criticisms of the Standing Committee. Essentially, however, the Bill is the same as that which passed its second reading on the previous occasion with only 19 opponents, and which derives directly from the unanimous report of a strong Royal Commission. The usual speeches in opposition to the reading of the Bill, on the ground that it would interfere with individual liberty, were made, but impressed no one, their sentimentalism and unfamiliarity with the real and serious problems being obvious. An amendment for the rejection of the measure found only 11 supporters, a majority of 343 recognising the need for immediate legislation. If ever an administration received a definite instruction from the sense of the House of Commons this was the occasion, and we may fairly expect to learn from the Government that they are willing to promise that the time shall be definitely set aside necessary to pass the measure before the close of the present session. It will be a real shock to thinking people if the Mental Deficiency Bill, after the unanswerable demonstration of the need for such a measure which has been afforded by high authority, and after the sense of the House of Commons has been expressed and reiterated in so unmistakable a manner, should again be allowed to lapse. The mentally defective crowd our prisons and lunatic asylums, and in so doing experience the kinder side of their fate; for, deprived of disciplinary and institutional care, they recruit the brothel and play the most degraded rôles in criminal circles. Charity in its religious sense and worldly wisdom alike call for the passage of the measure to protect these unfortunates; and we do not envy the intelligence of those Members of Parliament who oppose legislation on the ground either of Christianity or scientific knowledge. The fundamental lessons of biology are as lost upon them as the broad teachings of the Bible.

PHARMACISTS AND JURY SERVICE.

THE Departmental Committee on Jury Service, the report of which we noticed last week, has recommended that all registered chemists and druggists if actually practising be exempted from jury service. Pharmaceutical chemists, of whom there are 2021 on the present register—that is to say, those who have passed the major examination of the Pharmaceutical Society—have been exempt for over 50 years, but chemists and druggists, of whom there are 14,309 on the present register—that is to say, those who have only passed the minor examination—have never been exempt from service. If and when the recommendation of the committee is adopted by Parliament, an anomaly of long standing will be removed. As was shown in THE LANCET[1] after the passing of the Juries Act, the pharmaceutical chemists were able to obtain the exemption by proving that they were a body which could be defined by educational examination and registration, and that it was most difficult and dangerous for the principal to leave his business to serve on a jury. At that time there was no register of chemists and druggists, the drug business being in the hands of two classes—the pharmaceutical chemists who submitted to such an examination as guaranteed their capacity for dispensing and preparing medicinal substances, and the "outsiders" who had given no evidence of that qualification. As THE LANCET pointed out, among the latter were many very competent persons, but, on the other hand, there were many who were totally ignorant of the niceties of the difficult art which they practised, including "a kind of rabble of chandler-shopkeepers, stationers, perfumers, and others." There was no list of the competent persons who were not on the register of pharmaceutical chemists, and as the exemption clause secured for the latter could obviously not be extended to an indefinite number of persons, chemists and druggists were left out. Six years later the Pharmacy Act was passed and a register of chemists and druggists was set up, but since that time an opportunity of extending the exemption to chemists and druggists has not occurred, and they have taken their turn with other ratepayers and served on juries at great inconvenience to themselves and possibly at some danger to the public. A glance at the article in THE LANCET to which reference has already been made serves as a reminder that the awful announcement of the

[1] THE LANCET, August 16th, 1862, p. 178.

juryman in the case of Bardell *v.* Pickwick was an efficient argument for the cause of the pharmaceutical chemists in 1862. That chemist observed that he had "left nobody but an errand-boy in his shop. He is a very nice boy, my lord, but he is not acquainted with drugs; and I know that the prevailing impression on his mind is that Epsom salts means oxalic acid; and syrup of senna, laudanum." No doubt that little incident of the famous trial was not forgotten by the Departmental Committee, and it is to be hoped that the committee's recommendation will be embodied in a Parliamentary measure.

A MEASUREMENT OF THE CHEMICAL ENERGY OF THE SUN'S RAYS.

THE sun's rays during the late brilliant weather displayed extraordinary chemical activity according to some experiments made in THE LANCET laboratory. Their oxidising power, as shown upon a solution of acid potassic iodide, has been most marked, and it may be concluded, therefore, that their germicidal properties have been equally strong. The destruction of disease germs must have been very great during the period, and many enemies to the human race must, therefore, have succumbed. It is interesting to note that the maximum chemical intensity of the rays occurred between 1 o'clock and 3 o'clock P.M. each day, although it does not appear that the temperature reached its highest point in the same interval. Frequently the highest temperature records appear in the months of July and August, while in those months the chemical intensity never reaches the spring intensity, although the weather in the early part of the year may be, comparatively speaking, cold. The question as to what sunstroke is due has often been debated, but the general opinion seems to be that it is connected with the heat and not with the chemical energies of the solar rays. The heat rays, of course, are perfectly distinct from the chemical rays, and the one series can be separated from the other. The chemical rays easily set up a sun-burn or dermatitis, as is seen in the case of the ultra-violet ray lamp, but many authorities do not appear to think that the actinic rays are responsible for sun apoplexy. In the tropics during intense heat persons stopping within doors are frequently attacked, especially when they have been engaged in fatiguing work. Heat apoplexy may also occur in cloudy weather and at night when the conditions of temperature and humidity are oppressive. It is curious, also, that at sea the tropical sun is less fatal than on land, and while the passengers on deck may escape sunstroke the stokers and firemen below often suffer from prostration during such a voyage. In high altitudes, again, the chemical energies of the sun are very intense, and yet the heat leads to no discomfort. Sunstroke appears to be engendered by heat and to be due to the body failing to adapt itself to exertion under conditions which seriously retard or check the cooling of the body by radiation or conduction. According to the observation we have made that the maximum chemical intensity of the sun occurs, generally speaking, between 1 and 3 o'clock, it would seem reasonable to conclude that the greatest risk of incurring sunstroke, if it is due to solar chemical activities and not to heat, would be at this time. We are not aware, however, that a greater number of sunstrokes are recorded in this interval than at other periods. As giving some idea of the chief variations of chemical intensity shown in two recent sunny days, we append the following results recording the amount of iodine expelled by the rays from an acidified solution of potassium iodide in intervals of 30 minutes. Monday, June 2nd: 10.15 A.M. to 10.45 A.M., 4·06 milligrammes of iodine; 10.45 A.M. to 11.15 A.M., 4·57 milligrammes; 11.15 A.M. to 11.45 A.M. (unrecorded); 11.45 A.M. to 12.15 P.M., 5·53 milligrammes; 12.15 P.M. to 12.45 P.M., 6·40 milligrammes; 12.45 P.M. to 1.15 P.M., 5·58 milligrammes; 1.15 P.M. to 1.45 P.M., 6·60 milligrammes; 1.45 P.M. to 2.15 P.M., 6·75 milligrammes; 2.15 P.M. to 2.45 P.M., 9·29 milligrammes; 2.45 P.M. to 3.15 P.M., 10·51 milligrammes; 3.15 P.M. to 3.45 P.M., 6·45 milligrammes; and 3.45 P.M. to 4.15 P.M., 5·74 milligrammes. On Tuesday, June 3rd, the following results were obtained: 10.15 A.M. to 10.45 A.M., 6·60 milligrammes; 10.45 A.M. to 11.15 A.M., 6·90 milligrammes; 11.15 A.M. to 11.45 A.M., 8·63 milligrammes; 11.45 A.M. to 12.15 P.M., 8·63 milligrammes; 12.15 P.M. to 12.45 P.M., 7·77 milligrammes; 12.45 P.M. to 1.15 P.M., 12·19 milligrammes; 1.15 P.M. to 1.45 P.M. (unrecorded); 1.45 P.M. to 2.15 P.M., 8·78 milligrammes; 2.15 P.M. to 2.45 P.M., 6·09 milligrammes; 2.45 P.M. to 3.15 P.M., 5·74 milligrammes; and 3.15 P.M. to 3.45 P.M., 3·20 milligrammes (growing cloudy). The experiments throughout were conducted in exactly the same manner in each case, but some allowance had to be made when there was slight obscuration by passing clouds. On the whole, however, the period of observation was carried, as far as admissible, through an unbroken continuity of sunlight. If the chemical energies of sunlight are concerned in the physiological joyousness of the body, and are really the foundation of the cheerful effect of the bright sunny day, their measurement is clearly of interest and importance.

THE CURABILITY OF LEISHMANIOSIS.

WE are indebted mainly to our Italian colleagues for recent additions to our knowledge of this disease. Prior to 1909 infantile leishmaniosis was considered incurable, but Dr. G. Carsina has published eight cases of cure observed at Palermo. The reader will find details in a magazine published at Rome under the guidance of Professor G. Baccelli and others.[1] Out of 78 cases, verified by the presence of Leishman's parasite obtained by splenic puncture, there were 50 deaths, 8 recoveries, 12 remained ill, and 8 were lost sight of, making a percentage of about 14 per cent. recoveries. This satisfactory result was not attributable to any special remedies; salvarsan, arsacetine, cacodylate of iron and other arsenical preparations, Roentgen rays, and more recently progressive inoculations with dead cultures, had been used on a large scale, but none of them had shown any definite result. The only beneficial influence noticed seemed to follow the use of arsenical preparations in all forms, from cacodylate of iron to salvarsan. Cure seemed to have been the result of a natural process, and it is interesting to notice that in two of the cases a specific amboceptor for leishmania could be demonstrated after the cure, which it was not possible to demonstrate during the illness. Recovery, therefore, ensued owing to the immunising reaction of the organism, as in many other chronic infections, and the gravity of this disease depends on the fact that in the majority of cases such a reaction does not take place. If this explanation be the correct one it lends force to the hypothesis put forward by Jemma of the existence of slight forms of this disease which escape observation, and in which there is a strong immunising reaction which results in a rapid resolution before the individual presents such symptoms as would arouse suspicion. Recent observations, however, by Di Cristina put the matter in a different light. In a case of Leishman's anæmia, in which during life there was abundant and clear evidence of the presence of the parasites in the splenic juice, he found them absent at the necropsy in smears of various organs stained after Leishman's method, and in sections of organs stained with hæmatoxylin and eosin he found only a few parasitiferous cells in the liver

[1] Malaria e Malattie dei Paesi Caldi, Anno IV., 1913, Fasc. II.

and some scarcely recognisable in the bone marrow. Di Cristina interprets this phenomenon as a process which develops during life and to which are attributable the collapse and hyperpyrexia sometimes seen in these patients and which causes death through the entrance into the circulation of enormous quantities of substances resulting from the destruction of the parasites. In this way may be explained the febrile phenomena and the immediate cause of death in leishmaniosis, and probably also the recovery of the cases reported. In these cases the child had passed through all the stages of the disease up to its final stage—up to a time, that is to say, when complete destruction of the parasite takes place, causing death if the organism is unable to resist the high temperature, and collapse or cure if it is in a condition to tide over the critical moment.

MAY AT HOME AND ABROAD.

THE general character of the weather during the first half of May in this country was very different from that prevalent during the latter part of the period. Until the 14th there was a good deal of rain, relatively little sunshine for May, and a temperature very seldom as high as the normal during the daytime. Subsequently, however, a dull day was rare and a wet one rarer still, while the thermometer left its lowly figure and took a sudden leap to the summer level. On several parts of the west and south-west coasts, however, a persistent sea fog obscured the sun's rays and prevented the temperature rising, and there was no great increase of warmth either in Ireland or Scotland which could compare with that in the southern and midland counties of England. At Kew the mean maximum temperature of the month was 64°, or nearly 3° F. in excess of the normal. The greatest heat occurred on the 26th, when the sheltered thermometer rose to 81° at Kew and to 84° in some other parts of the metropolitan area. The nights were not cold for the time of the year even during the earlier half of the month, and the mean minimum temperature exceeded the average by 2°, the figure being 46·5°. In the more central parts of England both the days and nights were a little colder than in London, but there also they were warmer than those of an average May. In the south-west of England the temperature varied a good deal owing to the local sea fogs. At Torquay the mean maximum was as high as 61°, but at Newquay, where fog was at times very prevalent, the figure was no higher than 56°. At night, however, the difference was slight, the mean minimum at Torquay being 48°, and that at Newquay 47°. Very little rain fell after the 14th until local thunderstorms late in the month heralded the end of the hot spell. Generally the total rainfall diverged little from the normal. In London (at Kew) the difference was only about 0·05 inch. At some places in the south-west, however, there was an excess of 0·5 inch. The month, as a whole, was much brighter than May of last year, but few places had any large excess of sunshine, while in several localities the figure showed a considerable deficiency. At Kew there was an excess of 15 hours, the aggregate being 216 hours, while at Torquay, where the total was 218 hours, there were 11 hours less than usual. Jersey, the Scilly Isles, Bath, and Nottingham, all had less sunshine than Kew. At Scilly the total was no more than 177 hours, or 54 hours below the normal, and at Jersey, generally so bright, it was only 184 hours, or 60 below the normal. The south coast, as represented by Brighton and Bournemouth, were cooler during the daytime and warmer at night than London. Brighton had a mean maximum temperature of 60°, and a mean minimum of 48°, while the corresponding figures at Bournemouth were 61·5° and 47°. The extreme heat of the latter part of the month was much modified at Brighton, where a breeze from the sea prevented the thermometer rising above 71°, and at Bournemouth it only rose above 70° three times, the highest point reached being 77°. In London the 70 mark was passed on eight afternoons, and at Bath and Nottingham on seven. The main cause of the hot weather was, as usual in late spring and summer, the formation of an anticyclone over these islands and their vicinity, within which the sky was nearly cloudless, and the air nearly calm. The greater part of France, central Europe, and the Netherlands were also under the direct influence of the anticyclonic system, and experienced similar or greater heat. At Paris, where the mean maximum temperature was 67° and the mean minimum 48°, the sheltered thermometer ascended to above 80° on five days, its highest point being 86° on the 30th. The change to relative cold was, however, extremely sudden, as on the day following the maximum warmth was only 60°. In London the corresponding change was from 76° to 64°. At Brussels the change was even more striking, a maximum of 85° on the 30th being followed by one of 57° on the 31st. Central Europe, on the other hand, felt practically nothing of the inrush of cold air, the thermometer falling a few degrees only and continuing about 80° well into June. Paris, Brussels, and Berlin had almost the same mean warmth during the month, but Berlin was the driest, with only five days with rain, against 15 at Paris and 13 at Brussels. Biarritz enjoyed a more equable temperature than the inland localities. Its mean maximum was no higher than 65° and its mean minimum no lower than 51°. In common with the other regions it felt the sudden heat, and the five days 26th–30th all had a maximum above 80°. The earlier days of the month were unsettled and rainy, and rain again fell about the middle, but after the 17th there was none until the 29th. The total fall, 5·8 in., was about three times that in London.

SERUM TREATMENT OF EPIDEMIC MENINGITIS.

SOME six years have now elapsed since the introduction by Flexner and Jobling of a serum for the treatment of epidemic cerebro-spinal meningitis, and a considerable mass of observations is available as to the degree of curative power possessed by the preparation. Statistics of 1300 cases have been collected by Dr. Simon Flexner himself and published in a recent issue of the *Journal of Experimental Medicine*,[1] the notes of the cases being obtained from a large number of different sources in which trial of the serum was made. The difficulty of estimating the real efficacy of any remedy for human diseases is well known, and the most satisfactory method of proof is by comparison of the mortality of large groups of cases treated with and without the remedy, no selection being made of those which appear suitable or unsuitable for such treatment. This method can be carried out to some extent by a comparison of the mortality-rate of all cases before the introduction of the remedy with that obtaining among cases in which it has been employed, though owing to the differences in the virulence of a disease, as seen in different epidemics, this procedure is not free from sources of error, of which much has been made in the case of diphtheria by the opponents of antitoxin treatment. In the case of cerebro-spinal meningitis the fatality has varied in different places from about 40 to 90 per cent. before the introduction of serum treatment, averaging perhaps 70 per cent. if all were taken together. Excluding moribund cases, who lived only a few hours after injection, records are available of 1294 cases who received serum, and of these 400 died, or 30·9 per cent. Analysing the figures more closely, we find that of those treated within the first three days of the disease 18·1 per cent. died, of those treated from the

[1] Journal of Experimental Medicine, 1913, vol. xvii., No. 5, p. 553.

fourth to the seventh day 27·2 per cent. died, while among those whose treatment was delayed until after the seventh day the mortality was 36·5 per cent. This increasing mortality according to the delay in the use of the serum is very characteristic of the results seen in all serum treatment. Other points noted with regard to the action of the serum were its apparent effect in causing a sudden termination by crisis instead of the gradual defervescence which is the more common mode of termination in this malady, and its seeming power of diminishing complications such as affections of the ear and eye. Arthritis, which is another concomitant symptom in some cases, is amenable to treatment by direct injection of the serum into the affected joint. It is noteworthy that, as has been found in the case of trypanosomes treated with arsenical preparations, so with meningococci—there are some strains which are resistant to the action of the serum, while others acquire resistance in the course of the treatment. On the whole there is good reason to believe that in the serum of Flexner and Jobling we have a valuable remedy against a most dangerous disease, which should be used at the earliest possible moment in all cases, and which may be relied upon to save the lives of at least half of those who would otherwise have succumbed to the infection.

SKIN GRAFTING WITHOUT DRESSINGS.

A RECENT advance which has followed the use of iodine as an antiseptic in the treatment of wounds is the abolition of dressings. In the *Archives of the Middlesex Hospital* for December Mr. Alfred E. Johnson has stated that in over 50 cases in which it was possible to suture the wound closely he used no dressings. Tincture of iodine was painted over the wound directly after the operation, the area having been dried with ether beforehand, if moist. The iodine was reapplied a few times during healing and again when the sutures were removed. The cases included radical cure of hernia, appendicectomy, nephropexy, excision of superficial tumours, &c. The results were gratifying and the patients felt most comfortable. In the *Journal of the American Medical Association* of May 17th Dr. Joseph Wiener has called attention to the advantage of dispensing with dressings in skin grafting. In 1907 he saw in consultation a strong man, aged 43 years, suffering from extensive osteomyelitis of the tibia and fibula after crushing of the leg. There had been considerable sloughing of the muscles and skin of the leg, so that at a consultation of surgeons amputation had been decided on. Although there had been a profuse purulent discharge with septic temperature for several weeks Dr. Wiener advised against amputation, but he did not feel confident of saving the limb. He did several operations on the tibia and fibula, and there remained an extensive ulcerating superficial area extending from the ankle to the knee and involving about three-quarters of the circumference of the leg. Over this area some of the muscles had sloughed away. In the centre was a sinus discharging pus from the tibia. In spite of this he covered the large ulcerating area, with the exception of the sinus, with Thiersch grafts. In the sinus he placed an iodoform gauze-packing. If any dressing had been applied to the leg the pus from the sinus would have washed away the grafts. The leg was therefore simply swung from a bed cradle. Twice a day the iodoform gauze was changed without disturbing the grafts. In spite of the discharging sinus every graft took, and the man's general condition rapidly improved. He recovered with a useful leg. The result was so striking that Dr. Wiener has used the open method of grafting ever since, and in desperate cases has had gratifying results. In some, as in the first case, there were discharging sinuses in the area to be grafted, and yet the grafts almost always took. In one case double amputation of the breast had left an ulcerating area involving almost the whole anterior surface of the chest. In spite of various forms of dressing and local applications for several weeks there were no signs of healing, and the patient's condition, in consequence of absorption from the large ulcerating area, was becoming steadily worse. The discharge was so profuse that grafts covered by any form of dressing would have been unsuccessful. Dr. Wiener covered the entire ulcerating area with thin grafts and left them exposed to the air without any dressing. They all took, and the general condition improved rapidly and cure was soon complete. Dr. Wiener's technique is as follows. The grafts are cut as thin as possible and applied in the usual manner. Suppurating sinuses are packed with iodoform gauze. The packing is changed as often as it is saturated with discharge without disturbing the grafts, which take within half an inch of the sinus. On the first day or two crusts of inspissated serum form between the grafts. These should not be disturbed. For seven or eight days or longer no dressing is applied. Usually after the first day or two the grafts have become firmly adherent and have a healthy pink colour. After seven or eight days a weak ichthyol ointment is applied over the entire grafted area. Under this the crusts that have formed between the grafts drop off, and soon the area assumes a normal appearance. Dr. Wiener has found it inadvisable to apply a wet dressing, even a bland one, until at least two weeks have elapsed. If applied earlier it may macerate the grafts and destroy their vitality. It is better to wait ten days before applying the ichthyol. During this period the grafts are exposed to the air and are steadily becoming more hardy. In grafting the extremities the leg or arm is swung free from the bedclothes. In grafting the trunk a cradle to keep off the bedclothes is all that is required. The results of this method have been much better than those obtained when dressings were applied.

ENTEROPTOSIS.

THE tendency of the abdominal viscera to sink downwards in conditions in which the walls of this cavity lose their power of supporting its contents has been recognised for many years, and described under the various names of enteroptosis, splanchnoptosis, and Glénard's disease, but even now it is probably often neglected in practice, the symptoms accompanying it being attributed to lesions of the viscera or to neurosis. The affection may exist in various degrees of severity, from the familiar movable kidney to a condition in which practically all the abdominal contents sag down towards the pelvis. In the May number of the *Medical Chronicle* Mr. J. W. Smith describes a series of cases in which a falling of the intestine existed without apparent displacement of other organs, and he would restrict the name enteroptosis to cases of this nature. Like the other degrees of the malady this form is more common in women than in men, 8 cases out of 12 being in this sex. Nevertheless it is well to remember that men are not exempt. The large intestine was the part mainly at fault, and the result in several instances was to produce a condition of dilatation of the cæcum or some other part of it, with consequent accumulation of the intestinal contents in it as in a cesspool. In addition to the well-known symptoms of dragging pain or discomfort, increased in the erect posture and often relieved by pressure or support with the hands, Mr. Smith noted the existence of a point of tenderness in the right semilunar line, an inch or so below the umbilicus, as a frequent feature, while pain was complained of, not only in the lower part of the abdomen, but also in the epigastrium, thus giving rise to suspicions of

gastric disease. In one instance the pull of the colon actually produced a strangulation of the duodenum visible by X ray examination after a bismuth meal. A succussion splash was often obtainable over the cæcal region. As the condition is a merely mechanical displacement, surgical aid is indicated for its relief. This was of different kinds in the several cases. In some instances removal of a diseased appendix and breaking down of adhesions was sufficient to produce improvement; in others an anastomosis of the ileum and colon was performed; in others, again, resection of a redundant portion of the bowel was considered necessary. Of the 12 cases in this series 2 died as the result of the operation, and 1 died about a year afterwards, having undergone a subsequent operation for intestinal trouble.

DIRECT TRANSFUSION OF BLOOD IN RUPTURED TUBAL PREGNANCY.

THE direct transfusion of human blood has become practicable only in recent years, thanks largely to the technique of Crile. But few cases have been recorded of this operation, which is the most potent remedy in cases of hæmorrhage so severe as to threaten life. A short time ago we referred to a French case in which direct transfusion was performed for severe accidental hæmorrhage during labour.[1] In the *Boston Medical and Surgical Journal* of Feb. 20th Dr. R. M. Green has reported two cases of ectopic gestation in which he performed the operation. A nullipara, aged 25 years, who had been married a year, was admitted into hospital on August 8th, 1912. She menstruated last on May 26th. Twenty-four hours before admission she had a sensation of scalding, followed by severe pain in the lower abdomen. She had grown progressively weaker and had vomited. She was a well-nourished woman with an anxious expression. There was marked pallor of the skin and mucous membranes. The pulse was 136 and of fair quality, and the temperature was 98° F. The abdomen was moderately distended, slightly tender and rigid, especially in the left lower quadrant. There was movable dulness in the flanks. The cervix was soft and the external os patulous, but the internal was closed. The uterus was somewhat enlarged and globular. In the left fornix was bulging, doughy, tender resistance. There was a slightly blood-stained discharge. The leucocytes numbered 18,000, and the hæmoglobin was 35 per cent. The diagnosis of ruptured tubal pregnancy was obvious. On opening the peritoneum the abdomen was found full of dark fluid blood and clots, estimated to amount to three pints. The left tube was the site of ruptured ectopic pregnancy, and was tied off and removed. As the appendix was thickened and showed a few old adhesions it was also removed. At this time the pulse was 160 and of poor quality. In view of the precarious condition of the patient her husband was prepared for transfusion. While the abdomen was being closed his left radial artery was exposed under ½ per cent. cocaine local anæsthesia. The woman's left median cephalic vein was also exposed. Transfusion was performed with an Elsberg cannula. Good pulsation was obtained in the vein and the blood was allowed to flow for 25 minutes, the amount received being estimated at 1½ pints. During this period the woman's colour and appearance improved and her pulse fell to 132. The donor became pale and sighed several times, though his pulse rose only from 70 to 90. The transfusion was therefore stopped, the vessels were tied, and the wounds were closed with horsehair suture. The recovery of the woman was uninterrupted. After a few days her husband felt none the worse for the operation. In the second case the patient was a nullipara, aged 36 years. She was markedly pale and restless, and had a thready pulse of 140 and general abdominal spasm and tenderness. On opening the abdomen much dark clotted blood, a two-months' embryo, a ruptured right tube, and parovarian cyst were found. The cyst was removed intact. The pulse was 160 and the woman's condition was grave. Transfusion was performed, as in the preceding case, but was continued for 40 minutes as the donor's pulse was smaller. The patient's colour, pulse, and general condition improved markedly, and her pulse dropped to 120. The donor's condition remained apparently unchanged until the end of the transfusion, when he suddenly turned pale and sighed profoundly. The woman's recovery was uneventful, and the donor also recovered promptly and completely. In the first case considerable difficulty arose from bleeding from small radicles on the posterior surface of the donor's radial artery. These were cut in raising the artery from its bed. In the second case, therefore, the artery was mobilised only at the point where the cannula was applied; the remainder was mobilised at the moment of making the anastomosis, and the bleeding was much less. Dr. Green admits that both patients might have recovered without transfusion, but the prognosis was grave. At least the transfusion diminished shock and expedited convalescence. He points out the importance of performing the operation at the time of the laparotomy, so as to combat the shock of the primary operation and avoid the disadvantage of a second anæsthesia.

[1] THE LANCET, March 1st, 1913, p. 631.

DOES ALBUMINURIA TEND TO RECUR IN SUCCESSIVE PREGNANCIES?

THIS most reasonable question is often put to the attending obstetrician by the relatives of a patient who has had the symptoms of pre-eclamptic toxæmia, and it is not by any means easy to answer it as definitely and authoritatively as its importance deserves. Most text-books give no information on the subject; others quote the opinions or statistics of individual investigators, which are frequently found to be mutually incompatible. In the *American Journal of Obstetrics and Gynæcology* for May is an address by Dr. J. M. Slemons, associate professor of obstetrics at the Johns Hopkins University, in which he not only provides an answer to this question, but attempts also the much more difficult task of laying down rules by which those in whom such recurrence may be expected can be distinguished from those in whom it may not. The kind of albuminuria under consideration is that which is more than temporary, is accompanied by casts, and associated with unequivocal signs of auto-intoxication. Such pre-eclamptic (and sometimes frankly eclamptic) cases constitute, he finds, between 1 and 2 per cent. of obstetric cases. In the great majority of them appropriate treatment saves the life of the mother; and the point then arises whether such a primiparous patient should be advised not to run the risk of a possibly less fortunate issue on some future occasion. Dr. Slemons holds that statistics derived from private practice are more reliable in judging of this risk than those from hospital patients, because the latter include an undue proportion of severe cases, and accordingly he has compiled his statistics from private patients alone. The disadvantage of this is the reduction in the number of cases followed up, with corresponding possibility of vitiated results. He estimates that of every six women who suffer from toxic albuminuria in their first pregnancy, one may expect the complication to reappear. (In hospital practice Lepage estimated the percentage of recurrence at 21.) He then divides the cases into three types: those in which albumin disappears from the urine within a week of delivery, those in which it lasts six weeks or more, and those in which it lasts more than one week but less than six. The first class

are almost certain not to exhibit autotoxæmia in their further pregnancies; the second very probably will do so; of the third it is much more difficult to dogmatise. Data as to the total nitrogen and the nitrogen coefficient during the puerperium afford no help, in Dr. Slemons's experience, in forming the ultimate prognosis. Blood pressure observations, on the other hand, are of definite value. If at the end of two weeks after delivery the high blood pressure of eclamptic toxæmia has come down to normal, most likely there is no permanent damage to the kidney, and very little chance of recurrence of symptoms at a future pregnancy. If, however, the blood pressure is still in the neighbourhood of 200 mm. of mercury at the end of the puerperium, then the outlook is grave. These conclusions have been arrived at after observations made during the puerperium of many women, several of whom have been followed through subsequent pregnancies. Chemical methods of estimating the efficiency of the kidneys, which have come greatly into favour in America recently, have not thrown much light upon this particular problem of renal toxæmia. Thus the phenolphthalein test has been found wanting, inasmuch as many quite normal patients eliminate this drug so slowly during the last months of pregnancy that they would be considered, in other circumstances, to have a high grade of renal inefficiency. On the other hand, patients with pre-eclamptic symptoms often excrete it more rapidly than healthy persons. The study of the albuminuria and of the blood pressure remains at present, Dr. Slemons concludes, the safest guide; but he looks forward to surer and more satisfactory methods, which will remove that element of doubt at present attaching to the borderline cases between the two well-defined classes.

TREATMENT OF BEDSORES BY APPLICATION OF HOT AIR.

THE treatment of ulcers and wounds by a douche of hot air is a method which recently has come into vogue in France. In 1908 M. Dausset and M. Laquerrière described the prompt cicatrisation of suppurating wounds under this treatment. In 1911 M. Vignat reported its success in the treatment of torpid atonic ulcers. He described the case of a woman recently confined who had an enormous sacral bedsore which was healed in six weeks. The long duration and the frequent failure of the usual methods of treatment of this condition are well known. At a meeting of the Société Médicale des Hôpitaux of Paris on May 16th last M. Mosny and M. Pruvost reported the following case. A man, aged 21 years, was admitted into hospital on Sept. 4th for phlebitis of the left leg which followed an attack of broncho-pneumonia, some foci of which were still present. On Sept. 8th phlebitis of the right leg supervened. The temperature ranged from 102·2° to 104° F., and there were rigors and foci of subcrepitant râles in the lungs. About Oct. 5th he began to improve, but not till the 11th was the temperature normal. On the 16th the temperature again began to rise, and a bedsore formed on the sacrum. In spite of treatment it spread rapidly, and on the 23rd was of the size of a 5-franc-piece, and of a depth of half a centimetre. Its surface presented sphacelous débris. Nitrate of silver was applied without producing any improvement. The general condition of the patient again became bad. It was decided to apply hot air. The first douche was given on the 25th with M. Vignat's apparatus, which was placed at a distance of 20 centimetres and was brought gradually nearer until the air was applied at the highest temperature the patient could bear. The *séance* lasted a quarter of an hour, and already it was then observed that the ulcer had become red. A simple dry dressing was applied. On the 29th the ulcer was in process of cicatrising; instead of being covered with sloughing débris it was red and granulating. Air douches were given on this day and on the 31st, and on Nov. 2nd, 4th, 8th, and 14th. On the latter date the sore had cicatrised; there remained only an ulcer 1½ centimetres in diameter covered with a crust. There was not the slightest suppuration. During the same time the general symptoms had ameliorated. After Nov. 5th there was no more fever. The patient recovered appetite and put on flesh. The phlebitis completely disappeared and there remained only a few râles in the lungs. In the discussion which followed M. Achard said that he had obtained excellent results from hot air in the treatment of gangrenous ulcers. In a diabetic who had become cachectic after the formation of carbuncles, which lasted several months and gave place to gangrenous ulcers, hot air rapidly produced cicatrisation and prevented the development of further carbuncles, so that the patient gained weight and left hospital in a satisfactory state. In a subject of paraplegia due to spinal caries hot air did not produce cicatrisation of a bedsore which exposed the sacrum, but it cleansed the ulcer and stopped the suppuration and fœtor.

THE HOSPITAL QUESTION IN ITALY.

IN the illustrated monthly review devoted to the interests of hospital management in general, and more especially of the Ospedale Maggiore of Milan (February, 1913), there is a criticism on this subject inspired by an article in the *Rassegna Contemporanea* by Professor Michele Pietravalla, a medical Member of Parliament. This article sounds a note of alarm as to the indifference of the State to the insufficient and gradually diminishing means at the disposal of hospitals to meet the ever-increasing expenses of administration, food, medicines, and salaries. Granted the right, recognised by the State, of every poor person to hospital treatment when his disease requires it, it becomes the duty of the Government to provide for this by establishing provincial hospitals and instituting for their maintenance a central fund drawn from the communal rates in the first instance and augmented by the taxation of luxuries and supertaxation of large incomes. The journal of the Ospedale Maggiore does not view with any favour or enthusiasm either the practical convenience or possibility of such a central fund, entrusted to a Government subject in every Parliamentary division to local electoral influences. It would thus become an institution with all the defects of bureaucratic centralisation without the power of controlling serious financial questions, which would be left in the hands of those who were least competent to appreciate their greater or lesser urgency and importance. We recommend the perusal of this article to all those interested in the hospitals of this country especially in view of opinions expressed in certain quarters as to the advisability of State control of these institutions.

RETROGRADE INTUSSUSCEPTION.

IN a recent number of the *Revue de Chirurgie* there is an interesting paper by Dr. A. Catz on the subject of retrograde intussusception. He commences by describing a case which occurred in his own practice. The patient was a boy, 4 years old, and he had a retrograde intussusception of the small intestine, and the piece of bowel containing the intussusception had undergone torsion. When the abdomen was opened it was found that the mass was already becoming gangrenous, and the portion of bowel affected was resected, but the child died some eight hours later. One striking point about the case was that the symptoms were very slightly marked, though all the time a definite swelling could be felt. The absence of the passage of blood by the bowel has been noticed

in a few other cases of retrograde intussusception, and it has been suggested that this absence of blood may be utilised as an indication that the intussusception is retrograde, but in many other cases blood has been present as in ordinary cases of downward intussusception, though here also this sign may be wanting. Dr. Catz has collected particulars of 33 cases of retrograde intussusception, and as a result of the examination of the details of these cases he has formed certain conclusions. He shows that in many of the cases where there is a retrograde intussusception there is present also an invagination of the ordinary form, and this should always be looked for in these cases. He also points out that the diagnosis of the retrograde variety has never been made before operation, and he considers that this is an additional reason against the employment of the injection of liquids or gases in the treatment of intussusception, for injection would probably increase the invagination; but nowadays it may be said, in this country at least, no surgeon treats intussusception by any other means than operation.

BY an omission the names of Lieutenant-Colonel James Reid Roberts, C.I.E., I.M.S., surgeon to the Viceroy of India, and of Dr. Alexander MacCormick, of Sydney, New South Wales, were not included in the list of Birthday Honours published in our issue of June 7th. Lieutenant-Colonel Roberts has been promoted to knighthood, and Dr. MacCormick has been made a Knight Bachelor.

Professor J. Bordet, M.D., professor of bacteriology in the University of Brussels, directeur Institut Pasteur du Brabant, will deliver the Harben lectures at the Royal Institute of Public Health, 37, Russell-square, London, W.C., on Monday, Wednesday, and Friday, June 16th, 18th, and 20th, at 5 P.M. Lecture I. will be on Anaphylaxis; Lecture II. on the Mechanism of the Coagulation of the Blood; and Lecture III. on Microbian Variability in Relation to Sero-Diagnosis, with Especial Reference to the Micro-organism of Whooping-cough. All interested are invited to attend.

THE annual general meeting of the Research Defence Society will be held on Tuesday, June 24th, at 5 o'clock, at the Royal College of Physicians, Pall Mall, London, S.W.

WE regret to announce the death of Mr. E. W. Roughton, surgeon to the Royal Free Hospital, which occurred on Tuesday last. Mr. Roughton was only 51 years of age.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—The above society celebrated its fiftieth anniversary on May 28th, on which date the annual dinner was held at the Victoria Hotel in honour of the occasion. Sixty members and guests sat down, and a thoroughly enjoyable evening was spent. Dr. James Kerr, of London, proposed the health of the society, and Dr. D. Goyder, in reply, gave a very interesting account of the society from its earliest days. Only two members of the original society, he said, were still alive—namely, Mr. Harry Meade and himself—and he was glad to say they were both able to be present that evening. After mentioning the early struggles of the society he gave a list of many prominent men whom death had removed. The society had a great deal of scientific work to its credit, being, perhaps, chiefly renowned for the work on anthrax, with which was always associated the name of Dr. J. H. Bell, and at the present time that of Dr. F. W. Eurich, the President of the society. The toast of "The Guests" was proposed by the President, and responded to by Dr. J. E. Eddison and Dr. T. W. Griffith, of Leeds, and Mr. R. Mercer, of Bournemouth. Dr. J. C. Sykes proposed the toast of "The President," to which Dr. Eurich responded, and Dr. A. Manknell the toast of "The City of Bradford," responded to by Dr. W. H. Ellis.

PROGRESS AT HARROGATE.

ON Saturday, June 7th, at the invitation of the Great Northern and North-Eastern Railway companies and the Mayor and corporation of Harrogate, the Right Hon. the Lord Mayor of London (Sir David Burnett), attended by the sheriffs and other officials of the Corporation of London, paid a visit, with all the ceremonials of civic state, to Harrogate on the occasion of the opening of the extensions to the spa establishments. A special train conveyed the visitors from King's Cross, and besides the civic party there was a great number of well-known members of the medical profession present, and the London press was also well represented. The opening ceremony took place in the Winter Gardens of the Royal Baths in the presence of a large assembly. The platform presented a very picturesque spectacle, the Mayor of Harrogate, who presided, being supported by the Lord Mayors of Bradford, Leeds, and York, and the mayors of the boroughs and county boroughs of Yorkshire, all wearing their official robes and decorations. After the Mayor of Harrogate, in a pleasant speech, had welcomed the Lord Mayor of London to "the queen of inland watering places," Mr. Councillor Joseph Sheffield was called upon to give a sketch of the progress of the spa, from which we take the following amongst other interesting particulars.

There are more than 80 known springs of mineral waters at Harrogate, and of these 16 or 17 are used for internal administration and the remainder devoted to bathing purposes. The waters are divided into two main groups—sulphur waters and iron waters. The former are subdivided into three groups—namely, strong and mild saline sulphur waters, and alkaline sulphur; while the iron waters constitute two groups—namely, saline iron and pure chalybeate. The best known of all the wells is the old sulphur well, a conspicuous octagonal building familiar to all visitors to the town. The well in old times was leased at a comparatively small figure, but now the corporation derive an income from it of about £5000 a year. Owing to the accommodation of this popular resort having become inadequate a commodious annexe has just been completed which will prove a great convenience to its increasing patrons. In the height of the season no less than 2700 glasses of water are served each morning before 9 A.M. from this historic spring. A quarter of a million sterling has been spent on the wells and baths in the last 40 years or so. Last year over 500,000 tickets were issued to water drinkers and 160,000 for treatment. A decade ago the town was losing £2000 a year on the baths and wells. In the past seven years there has been paid off in redemption of debt and in interest something like £70,000, and in the same period £11,500 have been handed over in relief of rates. Last year, in addition to paying out of revenue a large sum of money for the further development of the treatment departments, £1000 were provided in relief of the rates.

After the Lord Mayor of London had declared the new extensions and additions to the baths to be open, the visitors were afforded the opportunity of inspecting the new buildings and methods of treatment.

In the evening a banquet given by the corporation and Medical Society of Harrogate took place in the Hotel Majestic, when there were present some 400 guests presided over by the Mayor of Harrogate. After the usual loyal toasts had been proposed and duly honoured, that of "The Right Hon. the Lord Mayor, the Aldermen, the Sheriffs, and the Corporation of the City of London" was proposed by Sir James Barr, President of the British Medical Association. This was responded to by the Lord Mayor, who gave a brief account of his favourable impressions of the health resort and its adaptations for the relief of disease. Sir James Crichton-Browne in a humorous speech next proposed the toast of "The Harrogate Medical Society," which was ably responded to by Mr. Shepherd Boyd, the president of the society. The toast of "Our Guests" was proposed by the Right Hon. Lord Faber, and responded to by Alderman Sir Thomas Crosby, M.D., LL.D., and Mr. Spencer Leigh Hughes, M.P. The last toast was that of "The Mayor and Harrogate Spa," proposed by Alderman Sir Charles Wakefield, to which the Mayor (Mr. Councillor J. S. Rowntree) replied in terms of cordial appreciation.

In commenting upon this interesting occasion and ceremony we may join in the congratulations which deservedly fell to the corporation upon the success that is attending the progressive policy of its various committees. We do so more particularly because this progress seems to us to prove that the qualifications of a watering place are not necessarily dependent upon a continental name or reputation. Our country, as a matter of fact, is just as favourably endowed with a variety of natural medicinal waters as are most countries abroad, but even where the qualities of the waters at home are not only equal, but superior, to those abroad of an analogous description, little, if any, attention has been given to making treatment a serious systematic matter. There has not been the *régime* insisted upon as is the case on the continent, where not only is a regular course of baths or of drinking required, but where at the same time a control over general and dietetic habits is demanded.

Such strict routine is only ensured by medical supervision, and requires relief in the shape of social amusements and an environment of healthy air and attractive scenery. Fortunately, the English watering places are invariably situated in beautiful country, and for the most part they are swept by a pure and invigorating air. Their armamentarium, in short, is good from the point of view of Nature's aids, but it is desirable that the benefits of these aids should be secured by methods of scientific administration and the routine made tolerable by social attractions and recreation. Watering-places have gained their growth and reputation, of course, from the fact of possessing a source of natural water endowed with thermal or chemical properties. Nowadays, however, it is considered that no spa is complete without the many supplementary methods of treatment which are not hydropathic at all, yet which are known to be of the greatest value. Hence, in addition to the variations in the methods of applying the natural water, as in mud baths, sprays, irrigations, internal administration, and so forth, relief is often obtained by the use of electrical, thermal, and mechanical appliances, as adjuncts to treatment.

The recent extension of such departments at Harrogate is particularly noteworthy. The appliances, for example, for electrotherapeutics at Harrogate are very complete, though the authorities have kept to those well-established methods of application which are most useful in conjunction with the treatments peculiar to the waters, and have not installed a lot of unnecessary apparatus. The hydro-electric bath is very complete, and every possible precaution is taken to make accident impossible. It has an independent electrical supply, which is quite detached from the town main, but to make doubly sure the baths are insulated so thoroughly as to give a resistance to earth practically amounting to infinity. Every form of current is readily available and under perfect control. Static electricity is supplied by a high-speed ebonite plate machine which appears to give satisfactory results. High-frequency electricity is obtained from about half a dozen sets of apparatus in various parts of the establishment. It is used through vacuum electrodes for a variety of conditions, for the production of ozone, and for what is called bipolar massage—a form of treatment that has given good results at Harrogate. The newer form of this current, known as diathermy, has been recently provided for and is gaining favourable opinions. By no other method can the temperature of the subcutaneous tissues be raised appreciably above the normal, and while this is not its only feature, this alone was almost certain to give it a high value in therapeutics. Another recent addition to the electrotherapeutic installation is the apparatus for the treatment of obesity as suggested by Bergonié. The current used is of the faradic variety, and by means of several electrodes distributed over the body according to a definite scheme the principal muscles are made to go through a series of rhythmic contractions against a load that is adjustable by the use of sandbags. The result is exercise without fatigue—there is a loss of weight from the beginning as well as an improvement in the general health. In addition to the above, there are a number of light cabinets of various kinds, coils for the production of dry heat, and other valuable appliances in which electricity plays a subsidiary part.

Equally complete are the installations, including the Berthollet treatment, the sulphur and needle baths, the Plombières bath and douche, Vichy massage douche, the liver pack, the oxygen bath, the Schwalbach bath, the brine bath, inhalation systems, throat sprays, nasal douche, radiant heat and light treatment, cataphoresis, massage, and, in fact, all the accessories which are now recognised as forming part of the scientific equipment of an establishment claiming to be progressive in all branches of balneo-therapeutics.

With the recent additions of a new pump room and the extension of the Victoria baths Harrogate has, in fact, set its houses of treatment in order, and when we couple this with the fact that side by side with these up-to-date methods of treatment abundant provision has been made for social amusements and recreation, the reproach that "they always do these things better at spas abroad" can no longer be advanced. By their commendable spirit and enterprise the authorities at Harrogate should help to remove the prejudice which has for too long existed in the minds of the British public as to the inadequacies and deficiencies of home health resorts. And what Harrogate has done other watering-places in the country might do.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following are among the amounts received at the Mansion House up to June 6th. Total to date about £33,000.

	£	s.	d.
St. Paul's, Onslow-square	203	0	0
St. Simon Zelotes, Upper Chelsea	156	0	0
Holy Trinity, Tulse Hill	143	0	0
Aldenham Parish Church	129	0	0
Emmanuel, Wimbledon	100	0	0
Greek Church, Bayswater	88	0	0
St. Thomas's, Portman-square	85	0	0
St. Stephen's, South Kensington	80	0	0
St. Philip's, Kensington	73	0	0
St. Nicholas's, Chislehurst	72	0	0
Immanuel, Streatham	70	0	0
Christ Church, Lee Park	53	0	0
St. Matthew's, Bayswater	52	0	0
Holy Trinity, St. Marylebone	52	0	0
St. Saviour's, Paddington	47	0	0
St. James's, Clapham Park	46	0	0
Christ Church, Beckenham	46	0	0
Chapel Royal, Hampton Court	45	0	0
St. Anne's, Soho	43	0	0
Hornchurch Parish Church	40	0	0
St. Mary's, Wandsworth Common	35	0	0
St. Saviour's, Denmark Hill	34	0	0
St. Paul's, Wimbledon Park	34	0	0
Parish Church with St. Mary-le-Park, Battersea	32	0	0
St. Clement's, Notting Hill	29	0	0
St. Alban's, Streatham	28	0	0
St. Bartholomew-the-Great, E.C.	27	0	0
Acton Parish Church with St. Andrew's Mission	27	0	0
St. Mary Magdalene, Munster-square	26	0	0
Mr. H. Dent Brocklehurst	25	0	0
St. Mary's, Hornsey Rise	25	0	0
All Saints', West Dulwich	22	0	0
Waltham Abbey Parish Church	22	0	0
St. Luke's, Eltham	22	0	0
Westminster Cathedral	21	0	0
Holy Trinity, Stroud Green	21	0	0
St. George's, Tufnell Park	20	0	0

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION TO THE COUNCIL.

ON Thursday, July 3rd, the Fellows of the College will elect four members of Council, as was stated in THE LANCET of May 31st, where were also set out the names of the present members of the Council. On the day of the election the ballot will also be open from 3 to 5 o'clock P.M. for those Fellows who may wish to record their votes by personal attendance at the College.

RECEPTION AT THE COLLEGE.

By permission of the Council of the Royal College of Surgeons of England Sir Rickman and Lady Godlee held a reception at the College on June 5th from 9 till 12 P.M. An exhibition of specimens of Prehistoric Man, by Professor A. Keith, who also demonstrated on some microscopical specimens, took place in the Museum, where Mr. Shattock also had an exhibition of pathological specimens, and Mr.

Burne a number of natural history specimens. In the Council Room some Hunterian manuscripts, books, and historical specimens were on view, and in the Museum, which was specially lit for the occasion, a ladies' orchestra played during the evening. Mr. Kearton's moving pictures were shown by him in the theatre.

INDIAN MEDICAL SERVICE.

The Annual Dinner.

THE annual dinner of the Indian Medical Service was held at the Hotel Cecil, London, on June 10th, under the chairmanship of Surgeon-General the Hon. Sir C. P. Lukis, K.C.S.I., Director-General, I.M.S. The following guests were present: The Marquis of Crewe, Secretary of State for India; Sir Thomas Holderness, Permanent Under Secretary; Sir Francis Champneys, Bart., President of the Royal Society of Medicine; Sir William Watson Cheyne, Bart., President of the Medical Society of London; the Editor of THE LANCET; and the Editor of the *British Medical Journal*. General Sir Beauchamp Duff, G.C.B.; Sir Thomas Barlow, Bart., President of the Royal College of Physicians of London; Sir Rickman J. Godlee, Bart., President of the Royal College of Surgeons of England; and Mr. Austin Low had been invited, but were unable to be present.

The following members of the Service dined:—Surgeon-Generals: Sir A. M. Branfoot, K.C.I.E., Sir R. Havelock Charles, G.C.V.O., J. Cleghorn, C.S.I., J. P. Greany, G. Hay, and Sir L. D. Spencer, K.C.B. Colonels: C. W. Carr-Calthrop, G. W. P. Dennys, D. ffrench-Mullen, B. B. Grayfoot, G. F. A. Harris, P. Hehir, D. E. Hughes, C. C. Little, M. D. Moriarty, R. D. Murray, A. Porter, and P. A. Weir. Lieutenant-Colonels: W. Alpin, J. Anderson, R. J. Baker, R. H. Castor, W. H. Cadge, J. T. Calvert, D. G. Crawford, P. J. Freyer, C. R. M. Green, H. Greany, E. A. W. Hall, J. Jackson, E. Jennings, E. R. Johnson, D. F. Keegan, M. A. Ker, D. P. MacDonald, W. Molesworth, J. Moorhead, T. R. Mulroney, W. H. Ogilvie, K. Prasad, W. G. Pridmore, J. J. Pratt, W. H. B. Robinson, W. H. Thornhill, D. Warliker, H. R. Woolbert, and H. G. L. Wortabet. Majors: W. R. Battye, R. Bonstead, P. F. Chapman, S. R. Christophers, de V. Condon, A. T. Gage, A. A. Gibbs, C. M. Goodbody, E. Hutcheson, F. H. G. Hutchinson, J. H. Hugo, W. Lethbridge, E. A. C. Matthews, J. H. MacDonald, F. O. N. Mell, O. St. John Moses, C. R. Pearce, E. L. Perry, Sir Ronald Ross, K.C.B., F.R.S., S. A. Ruzzak, R. F. Standage, J. W. Watson, and J. M. Woolley. Captains: C. H. Barber, F. Powell Connor, W. T. Finlayson, C. A. Gill, D. P. Goll, D. L. Graham, J. B. D. Hunter, H. H. G. Knapp, J. L. Lunham, G. E. Malcolmson, E. Selby Phipson, R. D. Saigol, H. B. Steen, J. Taylor, and W. P. Williams.

After the loyal toasts had been honoured the CHAIRMAN addressed the company. He said that, speaking after four years' experience as Director-General, the position and prospects of the Indian Medical Service were never brighter than at the present time. Steady progress had been made, and in many respects the conditions of service had been greatly improved. Annual increments of pension after 17 years' service had been granted, the fee rules had been satisfactorily modified, brevets had been awarded for distinguished service other than in the field, large grants had been made towards research and for the establishment of a school of tropical medicine in connexion with the Calcutta Medical College, and the King George Medical College had been opened at Lucknow. At no time in the history of the Service had honours and rewards been so freely bestowed upon its members. It was incorrect to say that the men now entering the Service were not up to the former standard. Taking the Service as a whole, 71 per cent. of the officers possessed higher qualifications, whilst the average for lieutenants alone was 73·5 per cent. So far from there being a falling off in the standard, they were getting better men than ever before. The Indian Medical Service still offered a magnificent career to men of the right stamp. Changed conditions would arise and competition would be keener; but remembering the medical needs of that vast country he believed that ample room would be found in India for themselves, for the sister service, and for the independent medical practitioner. Sir Pardey Lukis concluded with an acknowledgment of the deep debt owed by them all to Lord Crewe for his sympathetic consideration towards everything affecting the general welfare of the Service and the personal interests of individual officers.

Lord CREWE, in acknowledging the toast of his health, which was received with acclamation, spoke of the interest in medical progress and the admiration for the medical profession which he had always felt. As Secretary of State, formerly for the Colonies and now for India, he had been brought much in contact with medical and sanitary matters. He recognised that many difficult problems lay before the Indian Medical Service, but he wished to associate himself with the hopeful view expressed by their chairman.

There were no other speeches and the remainder of the evening was spent informally. The attendance at the dinner was the largest on record, and the honorary secretary, Lieutenant-Colonel P. J. Freyer, is again to be congratulated on a very successful entertainment.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

Port of Manchester.—This port, which is formed by the Manchester Ship Canal, was used by 1400 vessels coming from "foreign" and by 4732 ships arriving "coastwise" during 1912. It has become one of the principal food-importing ports in the United Kingdom, and Mr. W. F. Dearden gives a number of interesting particulars of recent results that have followed the inspection of foodstuffs which has been organised under his direction. One of the principal causes of the contamination by lead and tin which is sometimes found in canned goods, particularly tomatoes and other acid fruits, is the action of their liquid contents upon solder. The examinations of canned foods made at Manchester and other ports have largely contributed to the greater use of the "solderless" tin, which has not only been effective in minimising metallic contamination, but also has proved a commercial success. Mr. Dearden states that canners of American fruits are the latest converts to solderless methods. Nutmegs, which are not usually suspect, were imported during the year in an unsound condition, being found crumbly and practically useless in the interior. The cause was their attack by two species of beetles, one of which, Aræcerus coffeæ, is well known in its destructive effect on coffee beans. The beetle lays its eggs on the seeds, and when the grubs, which are whitish-brown in colour, wrinkled, and furnished with biting jaws, hatch out, they proceed to feed on the seed. The Malay Peninsula is the great native habitat of this species, but it may now be regarded as cosmopolitan, having been distributed all over the world in the seeds in which it has been feeding. Separation of the unsound nutmegs was effected by putting the consignment in brine of strength just sufficient to allow the sound nutmeg to sink. Some rather mystifying allusions in the report to imported "hog's fat" suggest that, notwithstanding the efforts which have been made to exclude from British ports the products made from carcasses that have been condemned at American packing-houses, a considerable amount of this material goes from America to Dutch ports, whence it is either shipped to England after the removal of tell-tale labels, or is refined and sent to us as lard. Mr. Dearden considers the only remedy to be that the Local Government Board should insist on a certificate of satisfactory origin being attached to each package of the refined and the unrefined variety. A contrast between the condition of American and Irish cattle brought for slaughter to the foreign animals' wharf is decidedly in favour of the former in regard to absence of tuberculosis. Mr. Dearden also draws attention to the dangers of the Irish dead meat trade which was rapidly developed last year during the prohibition of importation of live cattle from Ireland on account of outbreaks of foot and mouth disease in that country. It is evident that much of this meat was not systematically inspected in Ireland, and there is at present no guarantee of its entry into England at ports where it will be strictly examined before going into consumption, as the places of importation of meat from Ireland are not necessarily those where arrangements for inspection have already been made on account of the importation of foreign meat. Now that inspection

of imported foods has been thoroughly established under the Orders made by the Local Government Board under the Public Health Act of 1907, Mr. Dearden considers that the time has come for similar systematic work to be undertaken in the home markets. The port sanitary authority makes a practice of investigating the methods of storage, source of supply, and quality of drinking water in ships coming into the port, and requires the remedy of structural defects in drinking water tanks, their cleansing, and the provision of fresh water when necessary. These are very necessary measures, especially as water tanks are frequently provided in places which are inaccessible for cleansing and which are exposed to contamination. In two cases, however, a request to make tanks accessible for cleansing met with a refusal, and in others similar requests have not been obeyed. Mr. Dearden considers that ampler powers should be obtained to meet cases of this kind, and application has been made to the Local Government Board in the matter.

Port of Cardiff.—The systematic inspection of shipping in Cardiff is reported to have had good results which are shown by the diminution in the proportion of vessels frequenting the port that are found to have sanitary defects. Defects of one kind or another, however, were reported in as many as 882 out of 2858 vessels arriving "foreign" and in 619 out of 5330 ships arriving "coastwise." They consist principally of defective side ports, bulkheads, cable casings, stores, and ventilators; bad lighting and drainage, leaky decks, defective or unlined iron decks over bunks, causing damp beds and other evils, and defective water tanks and water closets. Dr. E. Walford states that as a rule very little difficulty has been experienced in obtaining compliance with the requirements of the port inspectors in these matters. The cleansing of water cisterns in this port is apparently secured under the powers of Section 70 of the Public Health Act, 1875, which were conferred on the port sanitary authority in its order of constitution. Systematic destruction of rats is carried out in the district and at the warehouses and docks. Only five vessels arriving from infected ports were subjected to rat destruction. The lowest number of rats destroyed on any of these ships was 160; the highest 396. In Cardiff the town council acts as port sanitary authority, and the city hospitals are available for infectious diseases brought by ship. Most non-infectious cases receive treatment at the Royal Hamadryad Seamen's Hospital. The port sanitary authority maintains a separate hospital on Flat Holm Island for cholera, yellow fever, and plague, of which, however, no cases were brought into the port during 1912.

Urban and Port Sanitary District of Barry.—Mr. G. Neale's observation that when inspecting vessels it is frequently necessary to request that dirty and verminous beds and offensive refuse should be destroyed in the ship's furnaces illustrates the unwholesome condition of crews' quarters in merchant ships, to which THE LANCET has recently drawn attention. In the town of Barry there are 124 licensed seamen's lodging-houses, which appear to receive very thorough attention in respect to their cleanliness, ventilation, and like matters. The population of Barry is now about 34,000. There are only about 40 houses in the district which were built before 1885, and until recently the number of working-men's dwellings has been greater than the demand. In 1901 there were 1404 vacant houses, but these have gradually become occupied, and now only 180 are empty. In fact, Mr. Neale considers that the problem of finding working-class houses will soon become acute, as owing to the increased price of building materials and other causes private building enterprise is now at a standstill. Partly, perhaps, on account of its recent growth and the age distribution of its population, Barry maintains a notably low death-rate: the figure was 10·4 in 1912. Between 1890 and 1900 the town had a characteristically high birth-rate, varying from 36·2 to 53·6 per 1000. This steadily declined to 26·9 in 1910, and in 1912 was only 23·9. The report gives a useful account of the sanitary equipment and arrangements of the town, but it contains printers' errors in surprising numbers.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 96 English and Welsh towns, with populations exceeding 50,000 persons at the last Census, and whose aggregate population at the middle of this year is estimated at 17,852,766 persons, 8845 births and 4129 deaths were registered during the week ended Saturday, June 7th. The annual rate of mortality in these towns, which had been 12·8, 13·4, and 13·5 per 1000 in the three preceding weeks, fell to 12·1 per 1000 in the week under notice. During the first ten weeks of the current quarter the mean annual death-rate in these towns averaged 14·1, against 14·0 per 1000 in London during the same period. The annual death-rates in the several towns last week ranged from 4·3 in Hastings, 4·4 in Walthamstow, 5·0 in Swindon, 5·4 in Hornsey, and 5·9 in East Ham, to 17·5 in Smethwick, 18·2 in Dudley, 19·3 in South Shields, 19·5 in Walsall, and 19·9 in Stockton-on-Tees.

The 4129 deaths from all causes were 494 fewer than the number in the previous week, and included 339 which were referred to the principal epidemic diseases, against 330 and 367 in the two preceding weeks. Of these 339 deaths, 105 resulted from infantile diarrhœal diseases, 97 from measles, 66 from whooping-cough, 36 from diphtheria, 23 from scarlet fever, and 12 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 1·0, against 1·0 and 1·1 per 1000 in the two preceding weeks. The deaths of infants under two years attributed to diarrhœa and enteritis, which had been 71, 70, and 81 in the three preceding weeks, further rose to 105 last week, and included 27 in London, 13 in Liverpool, 5 in Stoke-on-Trent, and 4 each in Manchester, in Salford, in Preston, and in Sheffield. The deaths referred to measles, which had steadily declined from 151 to 117 in the four preceding weeks, further fell to 97 last week, and caused the highest annual death-rates of 1·6 in Wolverhampton and in Salford, 1·8 in Bury, 2·0 in Dudley, 4·0 in Aberdare, and 5·0 in Walsall. The fatal cases of whooping-cough, which had been 65, 67, and 91 in the three preceding weeks, declined to 66 last week; 20 deaths were recorded in London, 7 in Liverpool, 6 in Manchester, 6 in Newcastle-on-Tyne, 5 in Sheffield, and 4 in Brighton. The deaths attributed to diphtheria, which had been 26, 28, and 41 in the three preceding weeks, fell to 36 last week, and included 18 in London, 2 in Birkenhead, and 2 in Manchester. The deaths referred to scarlet fever, which had been 22, 21, and 23 in the three preceding weeks, were again 23 last week; of this number 5 occurred in Birmingham, 3 in Newport (Mon.), and 2 each in West Ham, Liverpool, St. Helens, and Sheffield. The fatal cases of enteric fever, which had been 4, 11, and 14 in the three preceding weeks, were 12 last week, and included 2 in St. Helens.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospitals, which had been 1411, 1441, and 1430 at the end of the three preceding weeks, had further declined to 1427 on Saturday last; 202 new cases were admitted during the week, against 171, 193, and 177 in the three preceding weeks. These hospitals also contained on Saturday last 814 cases of diphtheria, 525 of measles, 302 of whooping-cough, and 38 of enteric fever, but not one of small-pox. The 1006 deaths from all causes in London were 111 fewer than the number in the previous week, and corresponded to an annual death-rate of 11·6 per 1000. The deaths referred to diseases of the respiratory system, which had steadily decreased from 255 to 162 in the five preceding weeks, further declined to 153 last week, but were 13 in excess of the number registered in the corresponding week of last year.

Of the 4129 deaths from all causes in the 96 towns, 191 resulted from various forms of violence and 377 were the subject of coroners' inquests. The causes of 28, or 0·7 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in London and in its 14 suburban districts, in Manchester, Sheffield, Leeds, Bristol, Newcastle-on-Tyne, Nottingham, and in 67 other smaller towns. Of the 28 uncertified causes of death last week, 6 were registered in Birmingham, 3 in Liverpool, 3 in St. Helens, and 2 in Sunderland.

HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns, with an aggregate population estimated at 2,259,600 persons at the middle of this year, 1187 births and 687 deaths were registered during the

week ended Saturday, June 7th. The annual rate of mortality in these towns, which had been 16·4, 16·3, and 16·7 per 1000 in the three preceding weeks, declined to 15·9 per 1000 in the week under notice. During the first ten weeks of the current quarter the mean annual death-rate in these Scotch towns averaged 16·9, against 14·1 per 1000 in the 96 large English towns. Among the several Scotch towns the annual death-rate last week ranged from 5·4 in Hamilton, 6·1 in Clydebank and in Ayr, and 9·7 in Leith, to 18·9 in Dundee, 19·5 in Kilmarnock, and 25·5 in Greenock.

The 687 deaths from all causes were 37 fewer than the number in the previous week, and included 94 which were referred to the principal epidemic diseases, against 93 and 107 in the two preceding weeks. Of these 94 deaths, 36 resulted from measles, 30 from whooping-cough, 12 from infantile diarrhœal diseases, 8 from diphtheria, 6 from scarlet fever, and 2 from enteric fever, but not one from small-pox. These 94 deaths from the principal epidemic diseases corresponded to an annual death-rate of 2·2, against 1·0 per 1000 in the 96 large English towns. The deaths attributed to measles, which had been 33, 40, and 33 in the three preceding weeks, were 36 last week, and included 18 in Glasgow, 11 in Aberdeen, and 5 in Dundee. The deaths referred to whooping-cough, which had been 32, 30, and 40 in the three preceding weeks, declined to 30 last week; of this number 19 were registered in Glasgow, 5 in Edinburgh, and 3 in Aberdeen. The fatal cases of diarrhœa and enteritis (among infants under 2 years of age), which had been 12, 11, and 16 in the three preceding weeks, were 12 last week; 5 deaths were recorded in Glasgow, and 4 in Edinburgh. The deaths referred to diphtheria, which had been 5, 10, and 6 in the three preceding weeks, were 8 last week, and included 3 in Dundee and 2 in Glasgow. The 6 deaths referred to scarlet fever were slightly in excess of the average in the recent weeks, and included 4 in Glasgow. The 2 fatal cases of enteric fever were recorded in Glasgow and Edinburgh respectively.

The deaths referred to diseases of the respiratory system, which had been 117, 81, and 118 in the three preceding weeks, declined to 98 last week; 21 deaths resulted from different forms of violence, against 36 and 22 in the two preceding weeks.

HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland with an aggregate population estimated at 1,199,180 persons at the middle of this year, 699 births and 382 deaths were registered during the week ended Saturday, May 31st. The annual rate of mortality in these towns, which had been 19·3, 18·1, and 19·2 per 1000 in the three preceding weeks, fell to 16·6 per 1000 in the week under notice. During the first nine weeks of the current quarter the mean annual death-rate in these Irish towns averaged 20·0 per 1000; in the 96 large English towns the corresponding rate did not exceed 14·4, while in the 16 Scotch towns it was equal to 17·0 per 1000. The annual death-rate during the week under review was equal to 16·0 in Dublin (against 12·9 in London and 17·4 in Glasgow), 16·7 in Belfast, 17·0 in Cork, 11·4 in Londonderry, 20·3 in Limerick, and 15·2 in Waterford, while in the remaining 21 smaller towns the mean death-rate was 17·8 per 1000.

The 382 deaths from all causes were 60 fewer than the number in the previous week, and included 13 which were referred to the principal epidemic diseases, against 30 and 29 in the two preceding weeks. Of these 13 deaths, 6 resulted from measles, 3 from enteric fever, 2 from scarlet fever, and 2 from infantile diarrhœal diseases, but not one from whooping-cough, diphtheria, or small-pox. The annual death-rate from these epidemic diseases did not exceed 0·6 per 1000; in the 96 large English towns the corresponding death-rate was equal to 1·1, while in the 16 Scotch towns it reached 2·5 per 1000. The deaths attributed to measles, which had been 10 in each of the three preceding weeks, declined to 6, of which 2 were registered in Belfast. Of the 3 deaths referred to enteric fever, which were equal to the average in the three preceding weeks, 2 occurred in Dublin and 1 in Kilkenny. The 2 fatal cases of scarlet fever were recorded in Belfast, and those of infantile diarrhœa and enteritis in Dublin.

The deaths referred to diseases of the respiratory system, which had been 94, 78, and 79 in the three preceding weeks, fell to 59 in the week under notice. Of the 382 deaths from all causes, 137, or 36 per cent., occurred in public institutions, and 4 resulted from various forms of violence. The causes of 13, or 3·4 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 96 large English towns the proportion of uncertified causes of death did not exceed 0·5 per cent.

In the 27 town districts of Ireland 667 births and 393 deaths were registered during the week ended Saturday, June 7th. The annual rate of mortality in these towns, which had been 18·1, 19·2, and 16·6 per 1000 in the three preceding weeks, rose to 17·1 per 1000 in the week under notice. During the first ten weeks of the current quarter the mean annual death-rate in these Irish towns averaged 19·7 per 1000; in the 96 large English towns the corresponding rate did not exceed 14·1, while in the 16 Scotch towns it was equal to 16·9 per 1000. The annual death-rate last week was equal to 15·9 in Dublin (against 11·6 in London and 16·0 in Glasgow), 17·1 in Belfast, 15·0 in Cork, 22·9 in Londonderry, 18·2 in Limerick, and 28·5 in Waterford, while in the remaining 21 smaller towns the mean death-rate did not exceed 17·6 per 1000.

The 393 deaths from all causes were 11 in excess of the number in the previous week, and included 31 which were referred to the principal epidemic diseases, against numbers declining from 30 to 13 in the three preceding weeks. Of these 31 deaths, 10 resulted from infantile diarrhœal diseases, 9 from measles, 7 from whooping-cough, 3 from scarlet fever, 1 from enteric fever, and 1 from diphtheria, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 1·3 per 1000; in the 96 large English towns the death-rate from these diseases did not exceed 1·0, while in the 16 Scotch towns it reached 2·2 per 1000. The deaths of infants (under 2 years of age) attributed to diarrhœa and enteritis, which had been 7, 11, and 2 in the three preceding weeks, rose to 10 last week, and included 4 in Belfast and 3 in Dublin. The deaths referred to measles, which had been 10, 10, and 6 in the three preceding weeks, were 9 last week, of which number 5 occurred in Belfast. The 7 fatal cases of whooping-cough were 3 in excess of the average in the earlier weeks of the quarter, and comprised 3 in Dublin, 3 in Waterford, and 1 in Drogheda. The 3 deaths attributed to scarlet fever were recorded in Belfast, and were equal to the average in the earlier weeks of the quarter. The fatal cases of enteric fever and diphtheria were registered in Dublin.

The deaths referred to diseases of the respiratory system, which had been 78, 79, and 59 in the three preceding weeks, slightly rose to 62 in the week under notice. Of the 393 deaths from all causes, 114, or 29 per cent., occurred in public institutions, and 6 resulted from various forms of violence. The causes of 12, or 3·1 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 96 large English towns the proportion of uncertified causes of death did not exceed 0·7 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Order in Council of April 1st, 1881, Surgeon-General Howard Todd, C.B., K.H.S., has been placed on the Retired List at his own request (dated June 5th, 1913), and Fleet-Surgeon Robert Hickson has been placed on the Retired List (dated June 10th, 1913).

The following appointments have been notified:—Surgeons: H. M. Whelan to the *Hearty*, and J. T. D. S. Higgins to the *Triton*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant Ronald Mackinnon to be Captain (dated June 7th, 1913). Basil William Brown to be Lieutenant (on probation) (dated May 17th, 1913).

Colonel H. M. Sloggett has arrived home for duty from Malta on appointment as Assistant Director of Medical Services to the Belfast District. Colonel F. J. Jencken has taken up duty at Colchester on expiration of leave of absence.

Lieutenant-Colonel D. M. O'Callaghan has been transferred from the Aldershot Command to Hilsea and appointed Senior

Medical Officer at the Military Hospital. Lieutenant-Colonel T. Du B. Whaite, at present stationed at the Royal Arsenal, Woolwich, has been placed under orders for service abroad during the coming trooping season. Lieutenant-Colonel F. R. Newland has been appointed to hold charge of the Military Hospital at Dover and Senior Medical Officer of the South-Eastern Coast Defences. Lieutenant-Colonel J. Thomson has arrived home from South Africa tour expired. Lieutenant-Colonel R. H. Penton, D.S.O., has been transferred from Muttra Cantonment to Ranikhet and appointed to hold charge of the Military Hospital. Lieutenant-Colonel H. E. Cree has taken up duty at Sialkot Cantonment on transfer from the Military Hospital at Solon, Simla Hill District. Lieutenant-Colonel M. O'D. Braddell has arrived home on leave of absence from Cawnpore Cantonment.

Major F. J. Palmer has been granted five months' leave of absence home from India. Major J. W. Leake has been appointed to the Eastern Command for general duty. Major G. J. Buchanan has been appointed Medical Inspector of Recruits to the Eastern Command in succession to Lieutenant-Colonel J. D. Ferguson, D.S.O. Major J. F. M. Kelly has joined the Royal Army Medical Corps Camp of Instruction at Longmoor, Aldershot, for a tour of duty on transfer from Colchester. Major N. H. Ross and Major A. L. Scott, at present serving at Aldershot, have been placed under orders to proceed abroad for a tour of service during the coming trooping season. Major C. F. Wanhill has taken up duty as Deputy Assistant Director of Medical Services, Sanitary Branch to the Fifth (Mhow) Division. Major A. W. N. Bowen has been granted six months' leave of absence home from India. Major A. Chopping has been appointed Registrar at the Royal Victoria Hospital, Netley, in succession to Major J. R. McMunn. Major R. S. H. Fuhr, D.S.O., has joined for duty at the Royal Arsenal, Woolwich. Major E. W. Slayter has been appointed to hold charge of the Military Hospital at Mount Abu and Residency Surgeon. Major M. Swabey has taken up duty in charge of the Military Hospital, St. Thomas's Mount, Madras. Major O. L. Robinson, specialist sanitary officer to the Sixth (Poona) Division, has been selected for promotion to fill the vacancy on the fixed establishment of lieutenant-colonels caused by the retirement of Lieutenant-Colonel T. E. Noding.

Captain D. F. Mackenzie has been transferred from the Military Hospital at Darjeeling to Meerut Cantonment. Captain H. W. Farebrother has been appointed to hold charge of the Military Hospital at Meiktila, Upper Burma. Captain W. McConaghy has taken up duty as Company Officer, No. 12 Company, Royal Army Medical Corps, at Woolwich. Captain W. J. Thompson and Captain O. C. P. Cooke have arrived home on leave of absence. Captain A. E. B. Jones has taken up duty at Bangalore Cantonment on transfer from the Military Hospital at Wellington, Madras Presidency. Captain J. F. Grant has been appointed Specialist in Electrical Science and Radiography at the Military Hospital, Maymyo Cantonment. Captain T. B. Moriarty has joined the Irish Command for duty. Captain J. A. Turnbull and Captain P. G. Easton have been permitted to exchange positions on the foreign service roster; the latter officer will now proceed abroad instead of the former during the coming trooping season. Captain F. J. Stuart has been transferred from the Military Hospital at Agra Cantonment to Muttra. Captain A. L. Stevenson has taken up duty at the Military Hospital, Nowshera, on transfer from Peshawar Cantonment. Captain A. C. A. Amy has been granted seven and a half months' leave of absence home from India. Captain K. Comyn has left Shorncliffe for a tour of duty at Gibraltar. Captain P. G. M. Elvery has been appointed to the Military Hospital at Cairo on transfer from Cyprus. Captain S. J. Higgins has joined at Fethard on transfer from the Military Hospital at Fermoy. Captain A. G. J. MacIlwaine has left Deepcut for a tour of duty in India. Captain C. McQueen has been appointed to the Aldershot Command for duty on return from South Africa. Captain W. Stewart has joined the Military Hospital at Colchester. Captain R. T. Collins has taken up duty in charge of the Military Hospital at Inverness. Captain C. Bramhall has been appointed Adjutant of the Royal Army Medical School of Instruction at Birmingham. Captain R. H. Nolan has been appointed to the Scottish Command for duty on return from Rawal Pindi Cantonment. Captain H. G. Gibson has been appointed in Medical Charge at Spike Island, Queenstown Harbour. Captain P. G. Easton has taken up duty at Aldershot as Specialist in Midwifery.

INDIAN MEDICAL SERVICE.

Colonel J. Smyth has been appointed to officiate as Assistant Director of Medical Services to the Ninth (Secunderabad) Division of the Southern Army in India. Colonel G. F. A. Harris, nspector-General of Civil Hospitals in Bengal Presidency, has been granted seven months' leave of absence home from India combined with furlough.

Lieutenant-Colonel H. B. Melville has been confirmed in the appointment of Chief Plague Medical Officer in the United Provinces of Agra and Oudh. Lieutenant-Colonel R. Maddox has been transferred from Gya to Ranchi, and appointed Civil Surgeon. Lieutenant-Colonel J. Jordan has taken up duty as Civil Surgeon at Hazaribagh. Lieutenant-Colonel W. E. Jennings has been placed on special duty in the Military Department of the Government of India. Lieutenant-Colonel C. T. Hudson has been appointed Civil Surgeon at Dharwar on return to duty from leave of absence.

Major R. W. Anthony has been appointed to officiate as Civil Surgeon at Surat during the absence on leave of Major J. H. McDonald. Major J. Good has been granted three months' study leave of absence. Major E. F. G. Tucker has been appointed to officiate as Professor of Medicine and Clinical Medicine and Therapeutics at the Grant Medical College, Bombay, during the absence of Lieutenant-Colonel L. F. Childe. Major J. M. Walker has been transferred from Rae Bareli to Aligarh and appointed Civil Surgeon. Major H. M. Mackenzie has arrived home on leave of absence from India. Major R. M. Hunt has been appointed Residency Surgeon at Bushire. The services of Major Jay Gould have been placed permanently at the disposal of the Home Department of the Government of India for appointment as Assistant Director-General, Indian Medical Service.

Captain D. L. Graham has been granted leave of absence home from India for one year and six months. Captain T. C. Boyd has been appointed to the substantive Medical Charge of the 42nd Deoli Regiment. Captain L. Reynolds has been granted six months' extension of leave of absence on medical certificate. Captain C. N. Brodribb has been appointed Staff Surgeon at Secunderabad Cantonment. Captain A. J. Lee has been appointed Specialist in Electrical Science and Radiography to the Sixth (Poona) Division. Captain W. A. Mearns has been appointed to the substantive Medical Charge of the 69th Punjabis. Captain C. B. McConaghy, agency surgeon, has been granted two years' leave of absence home from India. Captain C. F. Marr has taken up duty at Lahore as officiating Medical Storekeeper to the Government of India. The services of Captain T. C. McCombie Young have been placed permanently at the disposal of the Chief Commissioner of Assam for duty in the Sanitary Department. Captain M. A. Nicholson has been appointed to hold Medical Charge of the Lawrence Military Lunatic Asylum at Sanawar, in succession to Captain N. S. Simpson, whose tenure of appointment has expired. Captain P. L. O'Neill has arrived home on leave of absence from India.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Lieutenant Aston R. Dale to be Captain (dated May 29th, 1913). Cadet Sergeant Thomas James Kelly, from the Dublin University Contingent, Officers Training Corps, to be Lieutenant (on probation) (dated May 26th, 1913).

TERRITORIAL FORCE.

Royal Army Medical Corps.

3rd Home Counties Field Ambulance, Royal Army Medical Corps: Lieutenant Hector G. G. Mackenzie to be Captain (dated April 20th, 1913).

5th London Field Ambulance, Royal Army Medical Corps: Supernumerary Lieutenant Frank Coleman is absorbed into the establishment (dated May 4th, 1913).

Attached to Units other than Medical Units.—Lieutenant Joseph D. Wells to be Captain (dated Feb. 11th, 1913).

COLONIAL MEDICAL SERVICES.

West African Medical Staff: Dr. E. E. Maples, medical officer, Southern Nigeria, retires on pension. Mr. C. W. S. Boggs, medical officer, Gold Coast, and Dr. H. Fleming, medical officer, Sierra Leone, have also retired. Dr. G. M. Gray, medical officer, Southern Nigeria, has resigned. The

following have been selected for appointment to the staff: Mr. T. A. Dowse (Gold Coast), Dr. J. M. Benson (Northern Nigeria), Dr. E. H. Mayhew (Sierra Leone), Dr. E. M. Condy (Gold Coast), Mr. F. M. P. Rice (Southern Nigeria), Mr. F. E. Whitehead (Sierra Leone), Dr. G. G. P. Beckett (Gold Coast), and Dr. W. A. Young (Sierra Leone).—*Other Colonies and Protectorates:* Mr. W. M. Chambers, Dr. L. H. Taylor, Mr. V. T. W. Eagles, Dr. (Miss) E. M. Layman, and Dr. (Miss) L. S. McLean have been selected for appointment as Medical Officers in the Federated Malay States. Dr. V. Blacher Kyle has been selected for appointment as a Medical Officer in the Straits Settlements; Mr. G. S. Richardson has been selected for appointment as a Supernumerary Medical Officer in Jamaica; Dr. T. R. Boyd has been selected for appointment as a Medical Officer in Fiji; and Mr. C. R. Maitland Pattison has been selected for appointment as an Assistant Medical Officer at the Leper Asylum, Makogai Island, Fiji.

DEATHS IN THE SERVICES.

Deputy Surgeon-General J. Lloyd Thomas, R.N. He was surgeon of the *Temeraire* flagship in the Mediterranean and was attached to torpedo boat flotilla during the blockade of Greek ports by the International Fleet in 1886; surgeon in charge of Cadets' School *Britannia* (mentioned for introducing and conducting classes on "first aid," 1887–89); surgeon of *Bellerophon*, 1889–91 (especial mention for medical services rendered during an epidemic of yellow fever, 1891–92, whilst surgeon of the Naval Hospital, Jamaica); surgeon of *Porpoise* during the China-Japan war, 1894–95; was present at the storming and fall of Port Arthur, 1894, and at the bombardment and capitulation of Wei-hai-wei, 1895. He received for his services from the Emperor of China the Grand Order of the Double Dragon of China of the First Division, 3rd Class. He was senior medical officer of *Victory*, Naval Depôt, 1897–99; staff-surgeon *Endymion*, 1899–1902; principal medical officer of the Naval Brigade in the advance with the Allied Forces towards Peking, and was present in the actions on the route Tientsin to Peking and relief of the Legations in 1900 (m[illegible]tioned in despatches, promoted to fleet-surgeon, China medal and relief of Peking clasp, 1900). He retired with the rank of deputy surgeon-general in 1911.

ARCHIV FÜR SCHIFFS- UND TROPEN-HYGIENE.

In the number for April we find an article from Chung-King, far up the Yang-tse River, on Tropical Ulceration due to Symbiosis of Spirochætæ and a Fusiform Bacillus. Intravenous injection of salvarsan got rid of the spirochætæ in two days, when the bacilli became fewer and disappeared, and the sores healed. There was no syphilis in the case. Dr. V. van Vloten, a medical missionary, reports that amongst the 3600 cases he has in the last three years seen in the Canton Province 1½ per cent. have suffered from a massive enlargement of the spleen, for which he can assign no cause. It gave the patients little trouble except from its size, and the people affected were not at all emaciated, very sturdy indeed. There is no treatment, and the disease appears to be common in other parts of China. A melancholy interest attaches to the article by Surgeon-General Külz on the post-mortem records left behind him by Dr. Seiffert, of the Cameroon Railway. He was but two years in the colony, and worn out by his work for whites and negroes, died from liver abscess on his way home. Still he had found time to make detailed reports of 243 careful post-mortem examinations made on railway construction coolies who had died, though young and healthy when engaged. In every 100, 60 died from dysentery, either bacillary or amœbic, 25 from pneumonia (a virulently infectious form), and 5 from typhoid fever. Intestinal parasites were almost universal; 63 per cent. had ankylostoma; perisplenitis was almost constantly present, and dysenteric ulcers were frequently found in the small intestine. In one case the whole tract from pylorus to anus was attacked by ulcers. Many of the excerpts from Russian journals are concerned with the relation of camels to the spread of plague on the steppes. Reports are contradictory. Some think the camel carries plague without showing signs of the infection, as the goat carries Mediterranean fever.

Dr. William Scatterty has been promoted from Honorary Associate of the Order of the Hospital of St. John of Jerusalem in England to Esquire.

Correspondence.

"Audi alteram partem."

THE SIGHT TESTS OF THE BOARD OF TRADE.

To the Editor of THE LANCET.

SIR,—A letter from Dr. F. W. Edridge-Green appearing in your columns on May 31st makes some strictures on the work and recommendations of the recent Departmental Committee on Sight Tests appointed by the Board of Trade. Courtesy demands that criticism from one who has spent so much labour and ingenuity in the study of the difficulties of sight-testing as has Dr. Edridge-Green should receive reply from some one of those who collaborated in the report. I venture, therefore, to ask a few lines of your space in offering this, and the more so since I feel that his letter might prove misleading to readers not actually acquainted with the committee's findings and recommendations.

Anyone who will turn to the report of the committee will find in it that the question of determining a minimum standard of efficiency of form vision and colour vision requisite from persons certified as competent for watch-keeping duties at sea was gone into very carefully by the committee, and was dealt with by it. Perusal of the report will show also that experiments were systematically conducted with ships' lights at long and shorter distances, and on a scale, I think, more extensive than hitherto attempted. Also, the proposal to carry out the determining examination of referred candidates for higher certificates "on a river or at sea" was most carefully considered. It was rejected for reasons, which I think convincing, fully stated in the report.

A fact of importance in evaluating the recommendations of the report is the following. Even when colour-perception is normal defects of form-vision, due, for instance, to errors of refraction compatible with the Board of Trade's old standard, can cause not only difficulty and hesitation in the recognition of signal lights, but actual errors within the distances required at sea.

Dr. Edridge-Green has, as is well known, repeatedly and usefully urged the adoption of a colour lantern for sight-testing. It seems a little ungracious on his part if he now grudges the committee the attainment of a colour lantern well suited to the purposes before them. In designing the lantern recommended attention was, of course, paid to what were considered the good or bad features of earlier lanterns, and that is stated in the report. The lantern recommended cannot, however, be described as a "copy" of that used by Dr. Edridge-Green. The account of its construction and of the requirements demanded from it which the report furnishes should suffice to assure him of this.

I am, Sir, yours faithfully,

University of Liverpool, June 8th, 1913. C. S. SHERRINGTON.

SALVARSAN IN SYPHILIS.

To the Editor of THE LANCET.

SIR,—I read with interest Mr. Wansey Bayly's article in the issue of your journal of May 24th. I would, with your permission, like to add my name to the small list of practitioners who are opposed to the method of treating syphilis with salvarsan. May I be allowed to give a few of the reasons for my belief?

In what might be termed the pre-spirochæta days I had many thousand cases of syphilis under my care. The patients came from all parts of the world, chiefly from China, the Malay Peninsula, the East Coast of Africa, Egypt, the Indian provinces, and the town of Bombay itself, where I then lived and carried on a practice. I found the disease varied markedly in its severity according to the locality in which it was contracted or in accordance with the race of the person from whom the disease was acquired. It seemed to me that when a patient had once acquired syphilis the disease remained in his system indefinitely and might at any future time manifest itself, the later or parasyphilitic symptoms, such as locomotor ataxia or dementia paralytica,

being much more to be dreaded than either the secondary or the tertiary signs, not only on account of the general havoc which had been inflicted on the system before the parasyphilitic symptoms made their appearance, but also to our inability to cope with the disease in this stage.

Our knowledge of syphilis at that time (1876) was almost as complete as it is to-day, with the single exception that the spirochæta, the cause of the disease, had not then been discovered, although it was being diligently searched for. At that time I commenced to treat my cases of syphilis by a method which I still adopt. If the patient consulted me for his primary sore I excised the chancre and treated the wound with a strong mercurial lotion. I also prescribed mercury, mostly in the form of the biniodide, to be taken internally, with instructions either to again consult me or, if this was impossible, to increase the dose of the biniodide should any of the secondary symptoms of this disease manifest themselves. The patient was told to continue this treatment for two years. At the same time I advised that he should take at times a mixture containing nearly always either quinine or cinchona bark with arsenic.

The third part of the treatment consisted in the inunction of a biniodide of mercury ointment into the skin over the hepatic organ. The usual result of this treatment was that during the whole period of two years patients never suffered either from secondary or tertiary symptoms. Their general health was, as a rule, so good that I remember some of the patients questioned my diagnosis, and in some instances they stopped the treatment until they were convinced, by the appearance of the characteristic signs, that they had not only acquired the disease, but that it was still present in their system.

On the expiration of two years of the above treatment I advised that the treatment should be given up with the exception of the inunction of the mercurial ointment as above indicated. I pointed out to them that the use of this ointment was not only curative but also diagnostic. If there was no syphilis active in the system and the liver was in a healthy condition, one or, at the most, two applications of the ointment would cause very severe pain in the skin over that organ. If, on the other hand, syphilis was present in an active condition and the hepatic organ was in an unhealthy state, usually small and contracted, the ointment would fail to set up irritation of the skin for sometimes as long as a fortnight or three weeks. In such cases I found that during this period the small contracted liver gradually increased in dimensions; the daily amount of urine secreted was also much greater; the appearance of the patient improved while the ointment was being applied. I have entered with much greater detail into this matter in papers published in the *Provincial Medical Journal*, February, 1894, and in the *Scalpel* for July, 1900. I instructed the patients to use this ointment in the manner above indicated every month, and for one month in each year to take in addition biniodide of mercury internally in the usual medicinal doses; this last part of the treatment to be continued during the whole of the patient's life.

I have had the opportunity of observing many of these cases for nearly 40 years. Some of the patients I treated were married at the time they contracted the disease, and in not a few instances they unwittingly infected their wives. Others have since married. I have examined the children of parents both of whom I had treated for syphilis, and also the children when the father only had suffered from this disease. In neither instances have I ever been able to detect any congenital manifestations in the offspring. I here, of course, refer only to cases in which the children were begotten after the patient or patients had undergone a two years' course of the above treatment. In no single case where this treatment has been carried out have I ever known a patient to develop locomotor ataxy, dementia paralytica, or any other parasyphilitic disease.

I would like also to add that a modification of this treatment has in my hands yielded most excellent results in cases of well-marked tabes when such symptoms as loss of knee-jerk, Argyll-Robertson sign, lightning pains, unsteadiness of gait, &c., were all present. This treatment in three or four instances set up slight symptoms of mercurialism which in a few days disappeared. In the thousands of cases I have treated I am glad to be able to state that beyond this its actions have always been continuously and uniformly beneficial.

I leave this record to your readers to compare with the results obtained by the employment of salvarsan, which, I may add, I have seen injected intravenously, and I have also had the opportunity of examining some of the patients who have undergone a course of treatment with 606.

I am, Sir, yours faithfully,

JAMES CRAIG, M.B., C.M. Edin.

Llandudno, June 9th, 1913.

To the Editor of THE LANCET.

SIR,—I regret that Mr. Ernest Lane is of the opinion that I made erroneous statements in giving his name as one of those authorities who have been, or still are, opposed to the routine use of salvarsan in the treatment of syphilis. Although I knew that Mr. Lane advocated the administration of salvarsan in cases which he considered appropriate, I was of the opinion that by this he meant that he was not in favour of such administration as a routine, and I felt that there could be no mistake in this judgment of his opinion, as he had definitely stated, when he spoke at the discussion on syphilis before the Royal Society of Medicine, that he hesitated in recommending salvarsan as a routine treatment (June 17th, 1912, Proceedings of the Royal Society of Medicine, Volume 5, No. 9 (supplement), page 90).

I am, Sir, yours faithfully,

HUGH WANSEY BAYLY.

Upper Berkeley-street, W., June 4th, 1913.

EXPOSURE OF THE PELVIC PORTION OF THE URETER.

To the Editor of THE LANCET.

SIR,—I have read with interest in THE LANCET of June 7th Mr. Frank Kidd's article on a Small Muscle-splitting Incision for the Exposure of the Pelvic Portion of the Ureter, and agree absolutely with him that the incisions at present in vogue do a quite unnecessary amount of damage to the abdominal wall. However, experience gained in partial resections of the bladder for malignant disease has convinced me that the easiest and quickest method of exposing the pelvic ureter is through a median incision, and for over a year I have used this incision to the exclusion of all others when operating on this portion of the ureter.

Mr. Kidd says that the exposure of the ureter should be extraperitoneal; with this I agree if the ureter is to be opened, but if it is merely to be examined and palpated (as in cases of renal tuberculosis where cystoscopy and catheterisation of the ureters are impossible) I believe that a median transperitoneal operation is much the better. Both ureters can be palpated from the renal pelvis right down to the bladder through such an incision.

If the operation is for the removal of a stone in the pelvic portion of the ureter it can be performed extraperitoneally as follows. The patient is placed in the Trendelenburg position and the bladder moderately filled with lotion. A median incision is made from the pubis to within an inch of the umbilicus. All the structures down to the peritoneum are divided. The bladder, which is seen in the lower part of the wound, is pulled to the side away from the ureter in question. Thus if the operation is upon the right ureter the bladder is retracted to the left. The peritoneum is now stripped up from the bladder and from the lateral wall of the pelvis. An assistant next drains away the fluid from the bladder by simply removing the spigot which was inserted into the end of the catheter. A finger passed deeply into the wound, keeping close to the now flaccid bladder, soon meets with the terminal portion of the ureter, which can be easily followed up to the brim of the pelvis. If a ureteric catheter has been placed *in situ*, or if the operator feels the stone, this stage is exceedingly simple; in any case, a little blunt dissection of the fatty tissue at the side of the bladder will reveal the ureter crossing from the lateral wall of the pelvis. Once it is found it can be easily raised from its bed, a strip of gauze passed under it, and the stone removed. In performing this operation it is much better for the surgeon to stand at the side of the patient opposite to that of the ureter in question. In this way he obtains a much better view of the operation field than he would if he stood on the same side. This applies with equal force to operations for the removal of bladder tumours.

The advantages of this method are: 1. The incision does a minimum amount of damage to the abdominal wall. If it is carefully sutured in layers there is little risk of a ventral hernia. 2. It allows a transperitoneal exposure of the whole length of both ureters, and an extraperitoneal exposure of the pelvic portions of both ureters. In one case I removed eight stones from the right ureter and explored the pelvic portion of the left at one sitting. By any other method this would have necessitated two incisions. 3. Should the stone at the time of the operation be found to be in the intramural portion of the ureter the bladder can be immediately opened and the stone cut down on and removed from within. This point was illustrated by one of my cases. The patient had a small stone in his right ureter which he failed to pass after about six weeks' almost continuous colic. I exposed the ureter by means of this incision, but failed to locate the stone. After a few minutes' search I noticed a small, hard nodule in the bladder wall. I then opened the bladder, found that the stone was impacted in the intramural portion of the ureter, cut down on it and removed it. The advantage of removing such stones from within the bladder is obvious. Any other method of exploring the ureter would have necessitated a fresh incision for the cystotomy in this case.

I am, Sir, yours faithfully,

Harley-street, W., June 10th, 1913. J. SWIFT JOLY.

INSANITY AND DIVORCE.

To the Editor of THE LANCET.

SIR,—Dr. Batty Tuke's question is simple enough, and I will endeavour to answer it as simply. It is impossible to regard the reasons for the granting of divorce from a purely eugenic point of view. One is forced to take other things into consideration. Terrible as is the sorrow and suffering entailed upon humanity by the spread of tuberculosis, often owing, it is true, to the injudicious marrying of tuberculous persons, yet it would prove well-nigh impossible either to prevent such marriages or to grant divorce for any bodily sickness only, whereas in insanity the case is utterly different, and few persons will, I think, be found who will not concede its greater terrors and horror. A healthy mind, although clogged by a sick and suffering body, may yet prove a very efficient and beloved companion through life. A body in which the soul and mind are sick, smitten of the dread disease of insanity, can prove nothing but a curse to the unhappy man or woman who finds himself or herself tied to it for life with no hope in all the lonely years to come of ever forming fresh ties and a happier home.—I am, Sir, yours faithfully,

A. HAMILTON,
Organising Secretary, Divorce Law Reform Union.

St. James's-street, Piccadilly, W., June 6th, 1913.

SIR VICTOR HORSLEY AND MR. McKENNA.

To the Editor of THE LANCET.

SIR,—A constitutional position of interest, especially to the members of our profession, has just been created by the action of Mr. McKenna, the Home Secretary, and Sir Rickman J. Godlee, the President of the Royal College of Surgeons of England.

On March 18th, 1913, Mr. McKenna made a personal attack upon me by name in the House of Commons. On May 1st I wrote to him asking him to publicly withdraw his statements, they being from evidence in my possession inaccurate in several respects, and at the same time giving him the proofs of these inaccuracies. Further correspondence ensued but without any material result.

While this correspondence was still proceeding it came to my knowledge that Mr. McKenna had lodged a complaint against me at the Royal College of Surgeons without informing me that he was doing so or had done so. On discovering this I at once wrote to the President (Sir R. J. Godlee) and requested that a copy of the document or documents containing the Home Secretary's charges be furnished to me so that I might deal with them.

Sir R. J. Godlee, who did not reply until he received a letter from my solicitor, declined to accede to my request. This request I made, not only as a Fellow of the College, but also as a citizen of a country which prides itself on the fact that everyone who is accused is entitled to know at once exactly what charges are made against him with a view to being enabled to reply to them should he wish to do so.

I also wrote to Mr. McKenna making the same request. He also, while admitting that he had lodged charges against me, declined to inform me of the nature and detail of his accusations.

It appears to me to be extraordinary for a Minister of the Crown to make a complaint concerning a professional man's reputation without giving him notice, and further for the President of our College to refrain in his turn from informing the professional man thus complained against that such charges had been made and to refuse to disclose the nature of them when asked to do so.

I mention this incident as evidencing the pressing need for reform in the present constitution of the Royal College of Surgeons. I am, Sir, yours faithfully,

Cavendish-square, W., June 7th, 1913. VICTOR HORSLEY.

*** The circumstances to which this letter alludes were made the subject of questions and replies in the House of Commons on Tuesday last (see p. 1709).—ED. L.

TUBERCULIN TESTS.

To the Editor of THE LANCET.

SIR,—May I point out that the percentage rates which you quote from the Royal Commission Report on Tuberculosis in your leading article, "Tuberculin Tests," of May 31st, are subject to a very wide error, as the number of animals under consideration is much too small to justify percentage deductions. For example, 31 per cent. of animals infected with bovine bacilli and suffering from severe and progressive tuberculosis failed to react. The actual number of animals tested was 16; 11 reacted, 5 did not. The possibilities of failure lie between 1 per cent. and 64 per cent. Again, 9·8 per cent. suffering from general tuberculosis, not severe and not progressive, failed to react. The number of animals tested was 61; 55 reacted, 6 did not. The possibilities of failure lie between 1 per cent. and 19 per cent. Lastly, "in cases of minimal or local tuberculosis the percentage of failures was 8·5." Here 47 animals were inoculated; 43 were positive, 4 negative. The possibilities of failure lie between 2 per cent. and 21 per cent. The fact should be mentioned that there were 6 animals in the class "cases of general tuberculosis, not of the greatest severity but progressive, in which the reaction was always positive." As there is danger that these statistics appearing in a Royal Commission Report, and supported by THE LANCET, may be used outside to the detriment of the tuberculin reaction, would it not be well to point out the smallness of the numbers upon which they are based?

I am, Sir, yours faithfully,

R. STENHOUSE WILLIAMS.

University College, Reading, June 5th, 1913.

A SIDELIGHT ON CONTRACT PRACTICE.

To the Editor of THE LANCET.

SIR,—A short while ago the subject of payment according to work done as distinguished from payment *per capita*, which is theoretically a payment according to the estimated work to be done, the amount being collected by an equal assessment from all members of a group instead of from the individuals for whom the work has been done in proportion to their respective liabilities, was greatly to the fore. Of course, it does not matter one iota to the medical man if he is paid a fair fee for the 100 visits he pays whether the sum comes out of the pockets of those to whom he has paid the visits or by an average weekly payment from a whole group who have pooled their liabilities. But it does matter if he is called upon to face an unknown quantity of work for a strictly limited payment, which may quite likely recoup him on a totally inadequate scale of payment for the actual work done. It was the knowledge that when the receipts obtained under contract practice in the past were averaged against the items of service rendered they were always found to be absurdly inadequate that roused the antagonism of the profession at large to the *per capita*

method of payment. An interesting sidelight on this question is thrown by what has recently happened in the Barnstaple Poor-law District. In THE LANCET of Jan. 4th it was reported that the medical officer for the Ilfracombe rural district had resigned the appointment on account of the inadequacy of his salary and that no application had been received for the post. The ex-medical officer offered to continue to attend the patients until another medical man could be appointed at the remuneration of 2*s.* 6*d.* per visit and medicine, and 1*s.* 6*d.* for consultation and medicine at his surgery. This seems a very reasonable offer, and indeed was so considered by many of the guardians at the time. Now comes the sequel. At the last meeting of the board this medical officer rendered his account for the quarter, which amounted to £130 19*s.* 6*d.* for 761 visits and 478 surgery consultations (including medicine, of course, in both cases). Some of the guardians took exception to the account, but it was eventually settled. The interesting point, however, is that one of the guardians remarked that it would be hardly pleasant for the newly appointed officer to find that his salary was only one-eighth of the amount paid on the scale fixed for work done. But if that scale was only reasonable payment for the work involved, as many would maintain it was (myself among them), and as was generally agreed by the board when it was settled, the obvious corollary is that the salary is very greatly below what it should be, for it entails doing eight times the work for which reasonable payment is made. And that has been the trend of contract practice in the past, and in most cases the aim of those who have been responsible for it. Will there be any difference in the future?

I note from a communication from one of your Western County correspondents that the Barnstaple board of guardians are still unable to fill their appointment.

I am, Sir, yours faithfully,

June 9th, 1913. INTERESTED.

THE NATIONAL INSURANCE ACT: FIRST DAY CERTIFICATES.

To the Editor of THE LANCET.

SIR,—At an open meeting on June 6th of practitioners on the panel resident in the boroughs of Hackney and Stoke Newington the following resolution was framed:—

That, in the opinion of practitioners on the panel in the boroughs of Hackney and Stoke Newington, we refuse to grant insurance certificates on the first day of illness.

The chairman was asked to send a copy of the resolution to every practitioner on the panel in the said boroughs, which has duly been done.

I am, Sir, yours faithfully,

C. WYNDHAM GITTENS,

June 10th, 1913. Honorary Secretary, Hackney Medical Society.

LIBERTY AND THE NATIONAL INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—If we carry our memories back to one of those nights of our student days when two or three friends sat over the fire, pipe in mouth, and talked out the greater and lesser problems of the cosmos, love and liberty, medicine and marriage, shall we not remember that general practice came in also for consideration? And we may recall that there seldom lacked some instance of error in diagnosis amongst the newly admitted patients to give a text to hold forth upon the imagined methods of the "—— G.P." Then, was there not always one among us who with pity mixed with scorn would ask what is to be expected from those who work for such miserable fees, or rather from the medical profession, unless we rally to the ideals of medicine that nothing but the best in thought and pains is good enough to give? And did we not conceive of liberty as that state in which all conduces most perfectly to the complete fulfilment of ideals, that state in which the physician is most free to exercise his art to the best of his ability? For is not medicine an art, and are we not artists? What say our brothers of the brush? They have but scorn for him who, led by nothing but greed, gulls the public; but is there no pity in the studio for the hunger-stricken canvas—the "pot-boiler"? Greed they consider the ruin of their art, but the pot-boiler only suggests the question whether the poor public will ever learn to love good work enough to line poor painters' bellies.

We write, we talk about the "battle of the clubs"; but many medical men have heard the scratching of the wolf at the door.

The National Insurance Act has come, and it remains for us to work within it; but our art may yet be free to give her best to those who need it most. The old club rates have been improved; and if the mass of writing work is really to be taken from our hands, there is, I would submit, no doubt that our patients should get improved service. Already we no longer treat a score of those diseases that our fathers took in hand. These are fevers, some of which no longer need be reckoned with, having been gathered in to isolation hospitals; and provision is being made for the tuberculous in all their stages; the epileptic, too, will doubtless soon be cared for; and every year the net is wider spread to catch the mentally deficient and diseased. The general practitioner has a definite place in the treatment of these conditions, but it cannot be denied that as far as club patients are concerned our responsibilities have been lightened. Hygiene and better housing will reduce the sickness among those who are called the insured; and when the nation's teeth receive attention a host of ailments, great and small, will flee.

Surely the way to sweep away the type of practice that we must admit is not conducive to that state of liberty we have demanded for our art's welfare is to support amendments to "the Act" which shall sweep in within its scope all those who hitherto have formed the class of club patient (and their dependents too) and those who patronised the sixpenny and shilling consultation with a bottle of medicine. For wives and children of the insured class to-day are getting treatment (of a kind) at even lower rates than that of male club patients in bygone days with their 4*s.* 4*d.* yearly. There are those among us who eagerly take on to their books the uninsured club members (old, infirm, or not "employed") at the old rates and so keep up the former state of things, knowing full well they cannot afford to give their best in treatment at the remuneration. In a small town not far from where I write eight doctors practise, and not one of them but will accept a wife and any number of her children for treatment at 10*s.* paid per annum.

We must educate the insured themselves that competent "doctoring" is not simply the pouring of potions down their greedy gullets, and this sort of things will cease. The provision of a state pathologist working in close conjunction with the public health authority of the area is required. If we keep our faces set against the forms of practice that we all deplore (because they neither grant our art the proper place that she should hold, nor bring the artist aught but degradation, nor give the sick man aught but ill-placed hopes) I submit that the National Insurance Act may yet be made to serve its high purposes and our calling yet more closely conform to the principles of truth and liberty.

I am, Sir, yours faithfully,

June 7th, 1913. J. R. R. T.

THE MEDICAL GOLFING SOCIETY.—The annual tournament was held on June 5th on the Oxhey golf course. Play was 18 holes against bogey under handicap, the handicap limit being 18. In Class I. (handicaps 10 and under) G. A. Sutherland (2) was first with 4 down, L. A. Lawrence (8) being second with 5 down, and F. A. Rose (10) gained a prize for the best last 9 holes with 1 down. In Class II. (handicaps over 10) P. P. Cole (18) made the best net score of the day, being all square, thus winning the Henry Morris challenge cup, the Medical Golfing Society's gold medal, and the first prize. A. Eddowes (11) was awarded the second prize after tying with J. F. O'Malley (12). No player being permitted to take two prizes, J. F. O'Malley was awarded that for the best last 9 holes, being all square with bogey. The foursomes sweepstakes was won by J. Cunning and F. A. Rose (3 down), J. C. Clayton and J. F. O'Malley being second, with 4 down. The Medical Golfing Society owe a debt of gratitude to the Oxhey Golf Club for their hospitality.

MEDICAL PRACTICE UNDER THE INSURANCE ACT.

(BY OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1560.*)

XII.—THE FIGHT AGAINST THE ACT AT EDINBURGH.

Resentment against Coercion.

IF in Scotland the Insurance Act is more popular than in England, it has nevertheless been considerably opposed at Edinburgh. Two days before the panel was to be closed barely 50 Edinburgh practitioners had sent in their names, and at this time the risk of the institution of a whole-time service was very real. The Edinburgh doctors were threatened with an importation of practitioners who were supposed to be ready to start at any moment for any place; and the day was fixed when the advance guard was to proceed to Edinburgh. There was, it is true, a good deal of scepticism about this mobilised force—indeed, it was alluded to by some as "the phantom brigade." This would indicate that its appearance was not greatly feared, but the resentment produced by the threat had its influence. The cry was raised that the medical profession was going to be coerced, and therefore all honour was due to those who had the courage to stand out and resist such treatment. This feeling was shared by some sections of the public as well as a large portion of the profession. A leading Edinburgh practitioner, who has throughout been closely connected with the struggle, assured me that he was quite convinced that those medical men who refused to go on the panel would secure the best class of practice. All his own middle-class patients would remain with him. Many of them were now, he said, insured persons, but they would have nothing to do with the panel doctors; while the better working-class, who could not afford to pay twice over for medical attendance, had expressed their regret at being compelled to avail themselves of the panel doctors. Other patients who were not insured persons had congratulated my informant for not going on the panel, and the manner in which they expressed their pleasure clearly showed him that he would probably have lost them had he joined the panel.

Preparing for the Battle of the Clubs.

As there was but little openly recognised club practice in Edinburgh the Act may have seemed all the greater innovation. There were certain Friendly Societies, and some of the industries had a works doctor. The actual amount of club practice that there was in Edinburgh would be a difficult thing to estimate. Some of the best young men, while waiting for their openings at the hospitals, are known to have held these appointments, but they did not speak much about them, and probably never attended any meetings where the rate of remuneration was discussed. Even if a fair proportion of the Edinburgh general practitioners had had at some time or other some connexion with contract practice, the fact would remain, that club practice in Edinburgh was of little importance as compared to the club practice prevalent, for instance, at Glasgow and Dundee. Contract or club practice at Edinburgh only affected a small section of the population. Still the perils of contract practice had been perceived. Three years ago the Edinburgh and Leith Practitioners' Medical Association was formed, if not precisely for the purpose of checking the growth of contract practice, still to take cognisance of such abuses as already existed. The object of this association was to foster cohesion, social intercourse, and interest among the members, and membership only entailed the payment of 5*s.* annually to cover working expenses. It attended to local affairs, and when vacancies occurred it saw to the remuneration and prevented any undercutting. Some of the members of this organisation were also members of the British Medical Association, and I am told that the local body was hampered thereby in its action. However this may be, social relations were preserved and a friendly feeling throughout the profession was maintained in Edinburgh.

The Split in the Ranks.

It is worth while here to recall that some two years ago, when the Edinburgh Branch (including the Border counties) of the British Medical Association met at Peebles, one of the speakers advised that the 4*s.* 6*d.* then offered for medical attendance on the insured should be accepted, and there were a few others of the same opinion. It was remarked, however, that some of these partisans of the Bill in its original form were not themselves likely to be affected because they did not practise among the poor; and, further, that they were not in the habit of attending branch meetings of the Association. Consequently they were accused of political motives, and the word "blackleg" was also freely used. Finding the great majority against them, and, I may say, convinced probably of the mistake in their attitude, these supporters of the proposals of the Bill altered their views, but to such an extent that they also began to attack the insurance scheme. When in time the 8*s.* 6*d.* was conceded for medical attendance and medicine the early partisans of the Bill once more advocated the measure and endeavoured, with success, to persuade various practitioners to join the panel. But up to Jan. 4th, and in spite of the allurement of the 8*s.* 6*d.*, the profession at Edinburgh maintained its opposition to the Act. To bridge over the difficulty what was known as the Edinburgh scheme was drawn up and forwarded to London. It only proposed some slight modifications to the Act, such as that the Medical Subcommittee was to consist of six instead of three medical men, and six representatives of the insured, and a chairman without a casting vote, while any disputes relating to medical affairs were to be referred to this committee, and its chairman was to belong to the legal profession. This scheme has been described to me as a face-saving compromise, a sort of concession that was not a real concession, but would help to preserve the self-respect of those who had fought against the Act. On Dec. 6th, 1912, however, at the largest meeting of medical men that has ever been held in the city, the proposers of this scheme were informed that the Government would not approve of it, possibly because of some late addition to the draft. This meeting had been convoked by the Local Provisional Medical Committee. The chairman asked those present to decide whether the panel system should be accepted. Dr. Frederick Porter moved that such acceptance would be derogatory to the profession. The secretary of the Local Provisional Medical Committee, who had been opposed to the Act, was moved by altered circumstances, and in a very long speech, to urge the meeting to accept it. But on the vote being taken 64 were against forming the panel, 57 in favour, and there were 32 abstentions. The *personnel* of those who voted has to be taken into account.

The Medical Guild Formed to Fight.

This vote showed that the profession was cut in two. Unity of action appeared now out of question. A meeting was forthwith convoked at the Royal College of Physicians of all practitioners who refused to serve on the panel. When thus gathered together they formed a society called the Medical Guild to unite all members of the profession who were opposed to a State contract system and to the supervision of lay bodies in medical matters. The guild resented the forcible placing by State compulsion of private patients under a contract system, and maintained that, as a rule, contract practice was injurious to public health because it checked the development of the practitioner's skill and care. This view is still held by that body, and the Guild will seek to create close and friendly relations between its members and to assist those who are sacrificing their means of livelihood for their principles, and to maintain the high ideals of the profession. It will not only maintain these, but will strive to strengthen professional union, and to nurture that sympathy between physician and patient which many believe will to a great extent be destroyed by contract practice under the Act.

None of the majority who voted against the panel have gone on to the panel, but some of the minority who voted in favour of the panel, and went on, have now left the panel and joined the Medical Guild. This organisation is active in supplying insured persons with information and preventing false impressions. Thus many insured persons thought they would lose their benefits or be fined if they did not select a panel doctor. The Guild has written numerous letters to the press, and at times advertises the warnings which it wishes to give. The secretary of the Guild seemed very hopeful, and thought the strength of the organisation would go on increasing. The public, he insisted, was also against the panel doctor, but

this is a feeling which cannot be depended upon. I have heard that some of the insured, their old doctors not being available for themselves, have also removed the care of their wives and families. He had many new patients who had come to him because their usual medical attendant had gone on the panel. There were also several insured persons who came and paid fees because they thought their panel doctor had not examined them with sufficient care. The Guild was now, he said, about to organise a strike fund. Things were not going to work smoothly; there would be many a fight, and they must assist those who were hurt in the struggle. Even some of the practitioners with big working-class practices have refused to go on the panel, and these men stood to lose heavily. Some help must be forthcoming. Finally, the secretary of the Guild protested that it was false to say that the opposition to the Act was political. Many members of the Medical Guild were Liberals.

Short Life of the Scottish Medical Insurance Council.

Proceeding from the organisers of the Medical Guild to the officials of the Scottish Medical Insurance Council I did not find the same hopeful spirit. This Council should have wrought wonders, for it had the Scottish corporations, the four Universities, and the British Medical Association as its constituents. It was formed to combine the whole profession and to see that nothing was negotiated with the Government but with its sanction and approval. This Council was established early last year, yet I am told the organisation is already dead. The chairman, however, denied that this was official. They were not doing anything, but, nevertheless, they were not yet officially dead and buried.[1] They consisted of the Scottish Committee of the British Medical Association, of the three Scottish corporations, the four Universities, and a representative from each insurance area as defined by the Act. These bodies provided for the expenses and they had a paid secretary. From one and from the other I gathered that this council, though it promised to be very influential, had been crippled throughout by a fundamental difference with some of the members of the British Medical Association. It was generally felt that any organisation dealing with the Act should follow the topographical divisions established by the Act, but there was no relationship between the divisions and branches of the British Medical Association and the working of the Act in the insurance areas. In the insurance areas alone were the practical needs of each area known, and these needs differed greatly from area to area. The unit of representation, it was felt by many, had to be the insurance area. Any action taken must be in regard to one or more of these areas, no other sort of topographical division applied. It was no use getting a number of doctors to agree on some course of action if they all belonged to different areas; either they could not really agree or their agreement would be ineffective.

The New Unit of Medical Representation.

The Scottish Medical Insurance Council was formed to be a sort of parliament, each insurance area being a constituency which elected a representative. The British Medical Association has not been a sufficiently elastic body to meet the new situation by at once modifying its representative system so as to bring it into harmony with the constituencies. The local units had *de facto* been created, and with such coöperation the Council would have been much better able to cope with the problems arising out of the Act. As it was, the position was very difficult. I was asked over and over again what sort of connexion could imagination establish between the branches and the divisions of the British Medical Association and the insurance areas, each with its medical committee and its Insurance Committee. If any contest arose it would be in the area; if any payments had to be made it would be per area; if any expression of opinion was wanted it must come from such organisations as existed on the real field of battle—that was to say, in the area or areas concerned. Thus, the representation by areas made it early quite clear that as soon as the 8*s.* 6*d.* offer came resistance was foredoomed to failure. Whatever the universities might think and leading personalities in the profession might say, the duly elected representatives of the areas, speaking, not theoretically, but from their knowledge of their respective localities and of the practical issues, announced that the practitioners in their districts were going on the panel. Those who had hoped to set up a fight for the independence of the profession found their activities reduced to the contrivance of schemes to amend the Act. They had accepted the cardinal points of the British Medical Association, but from the first they had condemned the Act as an extension of the contract system, which they maintained, and maintain, is in itself a bad thing. Everyone knows the amount of right they have on their side. The Act took away from the medical profession many thousands of private patients and put them into the contract system. This was done without consultation with the medical profession, and was bound to lead to resentment, and also to faults and difficulties in carrying out the Act.

The Scottish Medical Insurance Council is not officially dissolved, but I doubt the ability to galvanise it into renewed life.[2] One of its leading officials remarked to me: "It is not our business to smooth the bed on which the profession has chosen to lie, for we might thus appear to approve of what we think is a bad thing. We desired to help the general practitioners to get such terms as could be accepted; now they have assented to what we conceive to be unacceptable. In any case the medical attendance on the community has not been improved. With the colliers and with those who had their works doctor, and with the members of Friendly Societies and clubs generally, it is just the same as before, only a larger number of medical men have been lowered to the level of club doctors." When my informant first embarked in the struggle he had hoped that the profession might be united into one army, but its forces, he said, had been scattered, and as a corporate body it was no longer of any use for fighting purposes. From the beginning there had been club doctors who received 2*s.* 6*d.* a head for contract practice, and they saw that if the Act gave them 4*s.* 6*d.* they would gain by it. Then when the sum was raised to 8*s.* 6*d.* a still greater number of practitioners found an advantage in the Act. This sort of Dutch auction of their services was not, he thought, in keeping with the dignity of the medical profession; but what, he asked, was to be done in the way of united fighting if every private in the force refused to be dictated to? The Scottish Medical Insurance Council had decided last December by a small majority that they would not work the Act. Later they decided to leave each area to make its own arrangements. It never occurred to them that the second decision destroyed the first. Finally, someone moved a resolution saying what should be done in the areas, but the chairman ruled it out of order, as they had just voted that each area must settle its action for itself.

From all this I could not help concluding that the situation, though not hopeless, is a very difficult one. In Edinburgh and the district it does seem as if the profession has been absolutely reft in two. In some areas the doctor who has refused to go on the panel may be conceived as standing on a pedestal where he receives much honour while the better-class patients cluster round him. But other insurance areas have no room for the pedestals, and there are no better-class patients to cluster round those who would stand on them. Consequently in these areas every single doctor is on the panel. It seems to me that the time for talking about preventing the formation of panels is past and gone, but the time may have come when the conditions of work on the panel can be scrutinised by the medical profession in Edinburgh as a whole. Existing differences of opinion may some of them disappear upon close consideration, due regard being had for actualities.

The Act Accepted at Leith.

Leith is the port of Edinburgh. Here I found that out of a population of 80,488 about 25,000 were insured and 22,000 had selected their panel doctors. These numbered 23 out of a total of 26 practitioners. They were all united and good friends, there was no split as at Edinburgh, and those few who had not gone on the panel had suited their own

[1] In THE LANCET last week one of our Scottish correspondents announced the withdrawal from the Scottish Medical Insurance Council of the British Medical Association. As the constitution of the Council was upon terms of union the retiral of the British Medical Association implies the dissolution of the Council. The chairman, Dr. William Russell, looks forward to its reconstitution on more active lines.

[2] Our Commissioner's article was written before the withdrawal from the Scottish Medical Insurance Council of the British Medical Association, upon which the constitution of the Council appears to cease.

convenience, and were not acting from any spirit of hostility. There is no wealthy class resident at Leith; these fortunate people all live at Edinburgh. There had been in Leith existent for some time both clubs and Friendly Societies paying only 3*s.* a year for medical attendance and medicine. The chemist got 6*d.* for medicine. There had been also some juvenile clubs. On the arrival of the Act the doctors had resigned all their appointments, and the low-rate contract club practice was swept away. The medical profession, instead of being divided as the servants of rival petty clubs run by workmen, are all now welded together as fellow panel doctors carrying out a vast scheme of national insurance. In Leith, in fact, the Act is working well, but it has had, however, one unfortunate consequence. The Leith Hospital used to engage a salaried practitioner to visit at their own houses certain of the poor who came under notice. The receipts of the hospital have now been so reduced that it can no longer provide this medical service to the poor. Therefore the local practitioners are doing the work gratuitously, or at any rate with the knowledge that to ask for money is to make bad debts. The town council has taken up this question, the public authorities feeling themselves called upon to act.

It will be seen that there is a world of difference between the positions at Leith and at Edinburgh, though the two places touch, and this difference was illustrated by all the many conversations I had with medical men and officials in both places.

(To be continued.)

CHOLERA AND PLAGUE IN THE NEAR EAST.

(FROM THE BRITISH DELEGATE TO THE CONSTANTINOPLE BOARD OF HEALTH.)

Cholera in Constantinople and Neighbourhood.

THERE is nothing striking to record in connexion with the prevalence of cholera in this city and neighbourhood since the date of my last letter (published in THE LANCET of Feb. 15th, p. 484). After Jan. 27th Constantinople was declared cholera free. But early in February several cases of cholera occurred among troops and in the general population of Cartal, a small village on the northern shores of the Gulf of Ismidt, at no great distance from the capital. Between Feb. 5th and 12th 9 cases were seen in the general population, and 20 cases with 8 deaths among the troops. It is thought probable that these figures were below the truth. As late as March 1st a fresh case was reported as occurring in a soldier at Cartal. Two days earlier a fisherman from this village was removed to the Greek hospital of Yedi Koulé, in Constantinople, suffering from symptoms of cholera. From March 12th several other cases of the disease began to be seen in the city, but the outbreak remained entirely sporadic and has now come to an end. The weekly records have been as follows:

Week	ending	March	17th	...	...	...	3	cases,	1	death.
,,	,,	,,	24th	...	...	...	1	case,	0	,,
,,	,,	,,	31st	...	...	...	4	cases,	1	,,
,,	,,	April	7th	...	...	...	3	,,	0	,,
,,	,,	,,	14th	...	...	...	1	case,	1	,,
,,	,,	,,	21st	...	...	...	2	cases,	2	deaths.
,,	,,	,,	28th	...	...	...	1	case,	0	death.

Since April 25th no fresh case has been reported. In all only 15 cases, with 5 deaths, were registered. Most of these were proved bacteriologically to have been cases of cholera, and it is as remarkable as it is fortunate that, in spite of the coming of the warm season, there has been no spread of the disease.

Cholera in the Turkish Provinces.

Apart from the cases at Cartal mentioned above, the whole of the Turkish empire seems to have been free from cholera since the beginning of the year. The only possible exception is the Shiah holy city of Kerbela, south of Bagdad, whence it was reported on April 10th that an inhabitant of the Abbasieh quarter of that town had fallen ill with symptoms of cholera, but no confirmation of this case has since been received.

Plague in Jeddah.

The annual revival of plague in Jeddah came unusually late this year. On March 10th a native inhabitant of the Damascus quarter of that town was found to be suffering from bubonic plague (confirmed bacteriologically), and he died the same day. The records of this outbreak since that date have been as follows:—

From	March	10th	to	March	30th	.....	7	cases,	7	deaths.
,,	,,	31st	,,	April	6th	.....	11	,,	10	,,
,,	April	7th	,,	,,	12th	.....	5	,,	4	,,
,,	,,	13th	,,	,,	19th	.....	1	,,	0	,,
,,	,,	20th	,,	,,	26th	.....	2	,,	2	,,
,,	,,	27th	,,	May	3rd	.....	2	,,	2	,,
,,	May	4th	,,	,,	10th	.....	1	,,	1	,,

In all only 29 cases, with 26 deaths, have been reported. The last case was seen here on May 7th, and Jeddah has now been declared plague free. The outbreak was unusually short and mild, as compared with those of preceding years in this port of pilgrimage.

Plague in the Persian Gulf.

On Feb. 18th His Majesty's Resident at Bushire reported by telegraph that plague had appeared at Debai, on the Arabian shores of the Persian Gulf. Details are still lacking of this outbreak, and it is not yet known whether the later appearance of plague in Bushire was in any way connected with it or not. The first announcement of the presence of the disease in Bushire was contained in a telegram dated April 17th. The following figures have since been communicated:—

Week	ending	April	19th	...	...	...	7	cases,	5	deaths.
,,	,,	,,	26th	...	...	...	6	,,	7	,,
,,	,,	May	3rd	...	...	...	9	,,	7	,,
,,	,,	,,	10th	...	...	...	3	,,	3	,,

No case of plague appears to have been seen in any other port of the Persian Gulf. Bushire, it will be recalled, has been the scene of recurring outbreaks of the disease for some years past.

Plague at Aden.

Plague has recently made its appearance in Aden. The first case apparently occurred on April 8th; a second case was seen on or before the 11th. The weekly returns have since been as follows:—

Week	ending	April	19th	...	...	...	4	cases,	3	deaths.
,,	,,	,,	26th	...	...	...	10	,,	6	,,
,,	,,	May	3rd	...	...	...	10	,,	3	,,
,,	,,	,,	10th	...	...	...	9	,,	9	,,

No information has yet been received as to the source of infection in this outbreak.

Plague in Khorassan (Persia).

There seems to be little doubt that plague was prevalent in the Persian province of Khorassan in the autumn of 1912, though but little detailed information on the subject has as yet been made public. The disease appears to have caused an epidemic at Kariz and along the valley of the river Jamrud, on the frontiers of Persia and Afghanistan. There were also rumours of the presence of plague in Afghanistan itself, but these have not been confirmed. At Turbat-i-jam the outbreak was said to have been over by Oct. 23rd. A Russian observer, Dr. Grekoff, isolated the plague bacillus from field rats found in the neighbourhood of Turbat-i-jam, where an epizoötic had been observed among these animals; but there does not seem to have been bacteriological proof of the existence of plague in human beings here. The epidemic, however, which undoubtedly occurred here is believed to have been one of plague, and it is thought to be connected with the outbreak of that disease which occurred later in the Merv neighbourhood, to which reference is made below.

Plague in the Kirghiz Steppes and Russian Central Asia.

There have been several outbreaks of plague in these regions since those mentioned in my last letter on this subject.[1] The occurrence of small epidemics of the disease at Rakhinka (Astrakhan government) and at Djambeitin (Uralsk government) were there referred to. It has since been reported that plague-infected marmots were found in both neighbourhoods. At Rakhinka a member of the medical

[1] THE LANCET, Nov. 9th, 1912, p. 1322.

mission at work there, Dr. Deminski, unfortunately became infected while examining the body of one of these animals, and died from plague on Oct. 9th (22nd); and three days later a Red Cross nurse, Mme Krasilnikova, who had nursed Dr. Deminski, fell ill with the same disease and died on Oct. 14th (27th). Early in October 8 cases of suspected plague were reported from the 10th *aoul* of the Buldurtin district (Uralsk government). Between the 18th and 28th of the same month (i.e., between Oct. 31st and Nov. 10th, New Style) three Cossacks in the settlement of Verkhnéudinsk, in the Transbaikal province, ate the flesh of some dead tarabagans (marmots). All three fell ill the same day with symptoms of plague and died three days later; post-mortem examinations showed that death had been due to the pulmonary form of plague.

Plague also appeared last winter in the territory of the Don Cossacks, where in the village of Popof, district of Essaoulof, 3 cases occurred in November and December; all died on the third day of the disease. From the beginning of November (Old Style) to Dec. 12th (25th) 22 cases with 13 deaths occurred here. Some cases were also reported from the villages of Kireyef and Akolzin in the same district. Down to Dec. 22nd (Jan. 4th) 50 cases and 16 deaths had been observed in the Don Territory. A still more serious outbreak of plague occurred about the same time in the neighbourhood of Merv, in Transcaspia. The principal centre seems to have been the *aoul* (Turkoman settlement) of Tchouiruk, 12 versts from Merv. The infection was believed to have been brought here by dealers in contraband crossing the Persian frontier from Khorassan, where, as stated above, plague was prevalent about this time. Between Nov. 26th (Dec. 9th) and Dec. 8th (21st) 29 cases of the disease, all of the pneumonic form and all fatal, had been seen here. Later reports put the total number of deaths here at 33. A report from the Persian consul at Askhabad, dated Dec. 29th, is quoted as reporting that 96 deaths from plague had occurred in the town of Merv itself, but this has not been confirmed; indeed, the Persian Embassy in St. Petersburg is reported as having informed the Russian Foreign Ministry early in January that the plague outbreak was confined to Tchouiruk in the neighbourhood of Merv. Very severe measures are said to have been taken at the latter town; quarantine posts were established around it, and all persons wishing to leave were there subjected to five days' quarantine.

Constantinople, May 19th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Department of Inspector of Abattoirs and Dairies.

THE Secretary of State for Scotland has appointed Professor Gerald Leighton, author of an excellent work on meat inspection, to the newly created department at the Scottish Local Government Board of Inspector of Abattoirs and Dairies for Scotland. The appointment marks an advance in public health administration, as for the first time the supervision, inspection, and organisation of the milk and meat trades are concentrated in one central authority working through the various local medical officers of health.

Chair of Medicine in the University of Glasgow.

The King has been pleased, on the recommendation of the Secretary for Scotland, to approve the appointment of Dr. Thomas Kirkpatrick Monro, at present professor of medicine in St. Mungo's College, Glasgow, to be professor of practice of medicine in the University of Glasgow in place of Professor Samson Gemmell, deceased. Professor Monro, a son of the late Dr. William Monro, of Arbroath, was born there in 1865, and was educated at the High School there. He graduated in arts at the University of Glasgow in 1884 and in medicine in 1888. In 1905 he took the degree of M.D. with honours. He is a Fellow of the Royal Faculty of Physicians and Surgeons, Glasgow. After graduation he studied for some time at Vienna, Berlin, and Paris. Professor Monro has been a physician to the wards and a clinical lecturer at the Glasgow Royal Infirmary for 14 years, and he has been a teacher of medicine at the dispensary, in the wards, or in the lecture-room for 21 years. Twelve years ago he received the appointment of professor of practice of medicine in St. Mungo's College, and for four years he has held the office of dean of the medical faculty of the College. He has been examiner in clinical medicine for the triple qualification of the three Scottish licensing corporations for a period of 13 years. He is a member of the Medical Advisory Board of the Consumption Sanatoria of Scotland and consulting physician to Bellefield Sanatorium. At one time in his career Professor Monro was pathologist to the Victoria Infirmary and also examiner in pathology in the University of Glasgow. He is the author of a manual of medicine, which is now in its third edition, and has published two other books, one entitled "A Study of the Chronic Degenerative Diseases of the Central Nervous System," and the other a monograph on Raynaud's disease.

Epileptic Colony for Glasgow.

The epileptic colony which has been erected by Glasgow parish council at Stoneyetts was formally opened last week. The buildings have been laid out in a semicircular form on the face of a small hill, and comprise an official, administrative, and six villa blocks, laundry block, recreation hall, medical officer's house, and tradesmen's and attendants' houses. The six villa blocks (three male and three female) are one-storey buildings, each having accommodation for 50 patients. The dormitories are quite detached from the rest of the buildings. The official block is two storeys in height and is situated in the centre of the semicircle. It contains accommodation for the female staff, with a medical officer's room, dispensary, and a recreation room for the nurses. The administrative block is situated immediately behind, and is attached to the official block by a covered passage. The recreation hall and workshops consist of a large hall planned to seat about 320, with tradesmen's workshops adjoining. The laundries, kitchen, lighting and sewage apparatus are all of the latest and most approved pattern. The cost per bed is estimated at £145.

Honour to a Dundee Medical Man.

Dr. W. Kinnear, of Dundee, Assistant Director of Medical Services in the Highland Division Territorials, has been honoured by receiving the appointment of an honorary physician to the King. Dr. Kinnear served for many years in the Volunteers, and has been connected with the Territorial Force ever since its inauguration. He became one of the original members of the University Battery of the 1st Fife Volunteer Artillery, under Professor Scott Lang, the captain, while a student at St. Andrews University; and on going to Edinburgh he transferred to the Volunteer Medical Staff Corps there, while on settling in Dundee he became attached to the 3rd V.B.R.H. (Dundee Highlanders), and was gazetted surgeon-lieutenant. In this corps he remained until 1903, when he was given command, with the rank of major, of a new Bearer Company which was formed in connexion with the Black Watch Brigade. When the Territorial Force was organised, Dr. Kinnear, as lieutenant-colonel, assumed command of the Third Highland Field Ambulance. Recently he was appointed Assistant Director of Medical Services in the Highland Division. Dr. Kinnear received widespread congratulations on his appointment both from the Territorials and the city generally.

Presentation of Shelter to Newhills Convalescent Home and Sanatorium.

"A Friend of the Institution" has presented to the Newhills Convalescent Home and Sanatorium a new shelter for the patients. It is 20 feet long by 12 feet broad and is light and airy. The shelter is named the "Doctor's shelter," and the opening ceremony was attended by many friends of the institution. This is the third shelter which has been presented to the institution.

National Insurance Act in Banffshire.

At a meeting of the Insurance Committee for the county of Banff held in Keith on May 30th, the medical benefits committee reported that an application had been made by 33 insured persons in Portsoy to make their own arrangements and desiring a local doctor who had not joined the panel to attend them medically. The medical benefits committee had decided by 5 votes to 4 that the application should be refused. The clerk stated that the applications came from patients or from members of the families of patients of the doctor. To the motion that the medical benefits committee's recommendation be adopted an amendment was moved that the applications be allowed, the mover, a medical man giving as his reasons that the Act was being

worked unwillingly and on compulsion, and that the doctor in question had had the courage to stand out. The amendment was carried b 9 votes to 6. The clerk further reported that Dr. Wilson, the Local Government Board expert, had described the scheme proposed by the county council for the treatment of phthisis cases in the county as excellent.

Proposed Sanatorium for Dundee.

The Dundee town council has decided to acquire Ashludie House, to the east of Monifieth, together with 48 acres of ground, at a cost of £7500. The building would form the administrative block in connexion with a scheme for the provision of beds for the treatment of consumption under the National Insurance Act, and the total cost, including initial outlay, is estimated to be £14,000. Of that sum it is expected that £5400 will be contributed by the Government. Dr. C. Templeman, medical officer of health of Dundee, reported that the 48 acres would be ample for all purposes for the city, and also that the representative of the Local Government Board had approved of the site when he had inspected it. It is understood that there is a large consensus of opinion in Monifieth that the presence of a sanatorium in the district would be detrimental to the growth of the village and detract from its attractions as a summer resort. At a meeting of Monifieth town council it was resolved to make a representation to the Local Government Board, so that authorities might have an opportunity of considering the situation from a Monifieth point of view.

June 10th

IRELAND

(FROM OUR OWN CORRESPONDENTS.)

Nursing Conference.

THE annual congress of the National Council of Trained Nurses of Great Britain and Ireland was held in Dublin on June 4th, 5th, and 6th, in the Royal College of Physicians. The congress was well attended both by Irish nurses and by visitors from England and Scotland. The first subject discussed was the Preliminary Training of Probationers, introduced by Miss Haughton, matron of Guy's Hospital, who pointed out that, as a direct result of the extensive research in medicine and surgery during the past few years, there was greater detail both in routine work and in the more highly specialised assistance which nurses were called upon to give in the ward, in the operating theatre, and in the various special departments. In other words, the physician and the surgeon demanded a high standard of intelligence and of general education from the women who assisted them in their scientific work. Miss Musson, matron of the Birmingham General Hospital, dealt with the subject of Post-graduate Training for Trained Nurses. She suggested that nurses engaged in private or district nursing or in cottage hospitals should every few years spend six or eight weeks at a large hospital, where teaching would be given, so that she might keep abreast of modern developments of nursing. A discussion on the Nursing of Venereal Disease was introduced by the Hon. Albinia Brodrick and Mrs. Henry Moore. A full discussion took place on the question of State Registration of Nurses, and a resolution was proposed by Mrs. Bedford Fenwick to the effect that State registration of nurses under a central professional authority, with entrance only by a one portal authority, was absolutely necessary, in the interest both of the professional status of nurses and of the public whom they serve. The meeting also urged that facilities be given for the second reading of the Nurses' Registration Bill at the earliest possible date. Mrs. Dickie, Insurance Commissioner for Ireland, read a paper on the Law as it Affects Nurses. She treated her subject under two heads, one dealing with the law of negligence, the second with the law of contract. A qualified nurse was bound to bring to a case a fair, reasonable, and competent degree of skill. Failing this, she was guilty and liable for the consequences thereof. Under the head of contract Mrs. Dickie dealt exhaustively with the question of appointment, notices of dismissal, &c., and cited some cases determining the law on the subject. She also explained the general principles of the National Insurance Act and the Workmen's Compensation Act as they affected nurses. An afternoon session was devoted to the discussion of questions of special interest to midwives. Miss Ramsden, matron of the Rotunda Hospital, read a paper on an Efficient Standard in Training for Midwives. Trained nurses, she believed, should spend six months, and untrained women 12 months, in learning their work. Exception might be taken to the length of the course she had suggested, but experience had taught her that the periods she had prescribed were no longer than was desirable. After this course the midwife would find it of great advantage to attend a course of lectures every two years in order to keep her in touch with the times and to learn new methods. On June 3rd there was a pageant illustrative of the history and development of nursing; on the 4th tableaux of nursing were presented; and on the 5th there was a dinner at the Mansion House.

Presentation to the Royal College of Physicians.

At a meeting of the Royal College of Physicians of Ireland on May 6th Dr. James Little, senior Fellow of the College, on behalf of the family of the late Dr. Lombe Atthill, presented to the College a portrait in oils of Dr. Atthill. Dr. Little recounted the connexion of Dr. Atthill with the Royal College of Physicians. Elected a Fellow in 1861, he was subsequently Registrar, and was elected President in 1888 and 1889. He also represented the College on the General Medical Council. The painting is the work of Miss S. Purser, Hon. R.H.A., and is an admirable likeness.

Tuberculosis Officer for Dublin.

Dr. P. J. Murray has been elected chief tuberculosis officer for the city of Dublin, subject to the sanction of the Local Government Board.

Infectious Disease in Belfast.

Between April 20th and May 17th, 1913, the number of infectious diseases notified was 234—i.e., 21 typhoid fever, 170 scarlet fever, 2 simple continued fever, 3 puerperal fever, 21 diphtheria, and 17 erysipelas. In the previous four weeks 161 cases were notified, and 68 in the corresponding period of 1912. The increase is due mainly to scarlet, but to a less extent to typhoid fever. It is reported that a large number of cases of scarlet fever have been traced to a milk-supply from a dairy situated outside the city, while, as to the typhoid, no common cause has been found, but it is said a considerable number of those attacked had previously eaten shell-fish. The death-rate in Belfast for the four weeks ended May 17th was 18·6 per 1000 from all causes, 6·7 from chest diseases, and 1·1 from zymotics. The deaths from phthisis were 79 between April 20th and May 17th. The long-continued epidemic of scarlet fever in Belfast is a remarkable fact.

Ulster Medical Society.

At the annual meeting of the Ulster Medical Society, held in the Medical Institute, Belfast, on June 5th, the following were elected office-bearers for session 1913–14:—President: Mr. A. B. Mitchell. Vice-Presidents: Dr. Thomas Houston and Mr. M. J. Nolan (Downpatrick). Council: Mr. R. J. Johnston, Dr. J. C. Rankin, Mr. W. McLorinan, Mr. P. T. Crymble, and Dr. J. L. Rentoul (Lisburn). Secretary: Dr. S. T. Irwin. Editorial Secretary: Dr. C. G. Lowry. Librarian: Dr. W. L. Storey.

June 10th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The French Société d'Ophthalmologie.

THE thirtieth congress of the Société d'Ophthalmologie on May 30th brought together a large number of ophthalmologists from Paris, the provinces, and abroad. M. Coppez, of Brussels, dealt with nystagmus, for the study of which, he said, many measures might be utilised, such as direct examination and graphic, kinematographic, and ophthalmoscopic methods. The author dealt with his subject under the following five heads: (1) Vestibular nystagmus, divisible into induced and spontaneous nystagmus; (2) the nystagmus of affections of the central nervous system; (3) the nystagmus of amblyopia; (4) miners' nystagmus; and (5) secondary varieties of nystagmus. Tracings of nystagmus, anatomical pictures, and kinematographic representations were thrown on the screen. M. Marc Landolt, M. Aubineau, M. Morax, M. Terrien, M. Terson, M. Moreau, M. de Lapersonne,

and M. Majewski took part in the discussion. The important subject of surgical intervention in glaucoma formed the next item. M. Lagrange described the later results of his operations. M. Kait, M. van Lint, M. Dor, M. Villard, M. Dehenne and M. Bailliart, M. Chevallereau and M. Offret, M. Bourgeois, M. Dupuy-Dutemps, M. Abadie, M. Polack, M. Armaignac, and M. Cuénod related their observations on different subjects. On the last day M. Terson gave the results of his personal experience in the best method of sterilising the hands before operating, and M. Landrieu, M. Brunetière, M. Liégard, and M. Page related some personal observations. The treatment of ocular syphilis was selected as a subject for consideration at the next meeting in 1914.

The Treatment of Obesity by Metallic Colloids.

On May 28th, at the Société de Thérapeutique, M. P. L. Tissier reported that having observed a notable loss of fat in two obese patients who were undergoing treatment with metallic colloids, he had conducted systematic experiments with this treatment in cases of obesity. The result was remarkable—viz., a mean loss of weight of from 200 to 500 grammes a week. The metals of the platinum group, long noted for their catalytic properties—particularly platinum, rhodium, iridium, and palladium—gave the most constant results. The dose varies with the individual, according to an absolute rule. Every dose that fails to produce a reaction remains without effect. The rise of temperature and the modifications of the urinary excretion are the most characteristic evidences of the existence of a reaction. Speaking generally, a useful reaction is rapidly obtained by administering progressively increasing doses.

Medical Students and the Three Years' Military Service Law.

The Association of Professors in French medical schools has presented to the Ministers of Public Instruction and of War a memorial embodying a resolution unanimously passed by them, in which it is stated that every Frenchman, without exception, ought to take part, if it is so decided, in three years of active service. Students in medicine and pharmacy will spend a certain time in military service to fit themselves for combatant duties, if they should be required. But the acknowledged shortness of the military and sanitary *personnel*, deficient even in peace time, would, says the memorial, become a very grave matter in the event of war, and the association holds that it is of the utmost importance to utilise, as soon as possible after preliminary training, the special aptitude of young men with medical training. With this end in view, it is recommended that students in medicine and pharmacy should be billeted at towns in which there is a faculty of medicine or preparatory schools of medicine and pharmacy, so that, so far as is compatible with their service as hospital attendants, and under the control of the military authorities, they could continue their medical studies and attain promotion at the earliest possible moment, so as to fill up to some extent the *personnel* of the service. The Conseil de Surveillance de l'Assistance Publique for its part, on the report of M. Bonnaire, has presented to the committees on the military law of the Senate and the Chamber of Deputies the following recommendation:—To prevent the defective working of the Assistance Publique, consequent on the interference that will be caused by the new law with the supply of resident officers in medicine, it is recommended that the general regulations concerning military service by students in medicine should afford for those who are preparing themselves for residence in the Paris hospitals as wide facilities as possible for attending their examinations. To this end the Conseil desires that the new law should give candidates for these posts latitude to satisfy the requirements of military service by arranging the service to take effect in various convenient ways, either in a single period or in two periods, the first of which should be two years. It has, moreover, passed a resolution regarding the competition for the interneship, enacting that in place of fixing the age-limit for admission to *concours* at 25 years, candidates who have fulfilled the requirements of military service should have the right to present themselves at the *concours* for a period of years beyond the age-limit equal to the number of years spent with the colours.

Donation to the Collège de France.

A munificent donation of 600,000 francs, with an estate of 10,000 metres, has provided for the establishment of a chair of tropical pathology at the Collège de France. The Assembly of the College has nominated for the choice of the Minister as occupant for this chair Dr. Nattan-Larrier and Dr. Tanon.

The Congress of Women.

This Congress terminated on June 8th with a final fête. Among the many things that occupied its attention one of the most important was the fight against alcoholism and against tuberculosis. At the instance of the feminist societies women have engaged energetically in the struggle. The Congress passed six resolutions against alcohol, among others the following:—That the Government should apply the existing laws, and particularly those forbidding the sale or gift of alcohol to children; that the number of drinking shops should be limited by Parliament; that the privilege of *bouilleurs de cru* should be done away with, and the diminution of the duties on denatured alcohol, which would facilitate the industrial use of what is no longer fit for drinking. The Section of Assistance voted in favour of the teaching of puericulture; for occupations favouring a return to the soil; and for the assistance of the sick in rural districts. The question of workmen's dwellings was debated. For the first time before so large a public gathering the problem of sexual education, a matter essential to the elevation of morality, came forward for discussion.

June 8th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Berlin Municipal Laboratory.

A RECENT report of the municipal laboratory of the city of Berlin states that the work of the laboratory has continually increased since its establishment a few years ago. The chemical department examines specimens of the food supplied to the municipal and other hospitals, as well as to lunatic asylums, convalescent homes, and other municipal institutions. It also analyses the milk delivered to the dispensaries for infants. The association of dairy proprietors has agreed to have the milk of their cows examined and their cow-houses inspected by the officials of the laboratory. The water distributed by the waterworks and taken from the rivers within and around Berlin is examined at regular intervals, systematic tours of inspection on a municipal motor-boat being made for that purpose. The bacteriological and hygienic department deals especially with bacteriological examinations in cases of diphtheria, tuberculosis, enteric fever, &c. It superintends the workmen who disinfect the homes of persons who have contracted any infectious illness, and gives its opinion in doubtful cases of disease when pathological specimens are sent to the laboratory by the medical advisers of the patients. When an epidemic of any kind occurs the pupils of the municipal schools are examined during it and afterwards in order to detect persons who may be carriers of bacilli. The examinations of food products, pathological specimens, &c., as above described, are made by the laboratory free of charge unless the work happens to be required in connexion with manufacturing industries.

Mesothorium and Roentgen Rays in the Treatment of Cancer.

At a recent meeting of the Medical Society Professor Bumm read a paper on the Successful Treatment of Cancer by Roentgen Rays and Mesothorium. He said that a year ago in a discussion held by this society the opinion was expressed that the only result of treatment by radium was the loss of valuable time, but he now wished to state that experiments recently made by him had led him to a different conclusion. During recent years great progress had been made by the use of "hard" tubes, and by the possibility of causing considerable quantities of the rays to penetrate to the deeper tissues by filtration. Another essential point was the industrial production of mesothorium. The internal organs were quite capable of resisting quantities of rays which on the skin would certainly produce severe burns. Professor Bumm remarked that Dr. Henkel had reported a case in which under the above treatment an inoperable cancer of the uterus had become operable, and added that his own experience confirmed this statement. In the patients whom he had observed the fœtid secretion disappeared, the ulcers began to heal, and the growth by-and-by became changed into a sclerotic mass consisting of connective tissue. Whether there was a selective action of

the rays on the cancerous tissue could not be ascertained. Healing was produced either by casting off the ulcer or by an absorption of the growths. Of the cases in which treatment by radium had been used a total extirpation was performed in two instances, and in both of them cancerous material was found on microscopical examination; complete success was, therefore, not obtained. The problem was to send great quantities of rays into the deeper layers without producing necrosis of the healthy tissue. He had seen perforation of the bladder in two cases due to an indiscriminate action of the rays, and also a total necrosis of the uterus. He was of opinion that the treatment of relapses and of inoperable cases was much improved by the administration of the rays, the pains being especially relieved. In every case in which an operation for cancer had been performed there ought to be subsequent exposure to the rays at intervals for a considerable period for the purpose of avoiding a relapse.

Operation for Paresis due to Poliomyelitis.

At a recent meeting of the Berlin Medical Society Dr. Katzenstein showed a child, 8 years of age, suffering from paresis of the left arm due to poliomyelitis. The voluntary movements of the limb consisted only of a weak extension of the proximal phalanges of the fingers and a slight flexion and pronation of the forearm and wrist. Dr. Katzenstein implanted the supraclavicular nerve of the right side on the brachial plexus of the paretic side. Two months after the operation new movements began without the employment of either electrical or mechanical treatment. The patient was now able to extend and to flex the proximal and middle phalanges, to adduct and abduct the thumb, to extend the wrist, to supinate and pronate the forearm, and to extend and flex the elbow. The paresis had lasted for about seven years. The case was of great importance, showing as it did a new method of successfully treating conditions which were formerly considered to be hopeless.

An Institute for Cancer and Lupus.

The Prussian province of Westphalia will celebrate the jubilee of the German Emperor in a very practical way, for the provincial authorities intend to collect a fund for researches on cancer and lupus and the treatment of these diseases. The institution will be in connexion with the University of Münster, the capital of Westphalia, where a medical faculty will soon be established. Contributors may subscribe any amount at their discretion, even the smallest sum being welcome. It may be remembered that the province of Westphalia is reckoned among the wealthiest districts of Germany, as it includes a great coalfield and important manufacturing cities, such as Dortmund, Bochum, and Gelsenkirchen; a large sum is therefore likely to be collected.

June 9th.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

Interdiction of Dr. Friedmann's "Cure."

THE Department of Health of New York city on May 29th passed a unanimous resolution forbidding the use of living bacterial organisms in the inoculation of human beings for the prevention of disease unless a full account of details of the preparation of such serum has been sent to the Board of Health and the latter has given permission in writing. This resolution was, of course, specifically directed against the employment of Dr. Friedmann's remedy, since he has established an institute for the treatment of tuberculosis by means of his serum in New York city. The New York City Board of Health some time ago authorised Dr. Charles H. Slade to investigate the turtle vaccine treatment. Dr. Slade's report of the investigation was strongly adverse, and acting on this report the Board have taken the action referred to above. The resolutions adopted were as follows:—

Whereas in the judgment of the Board of Health the use of living cultures of bacteria in the inoculation of human beings for the prevention or treatment of disease may be fraught with serious danger to individuals and the public; and whereas the necessity and the harmlessness of such a proceeding can be safely determined only by carefully planned and controlled and unbiassed scientific measures and observations; and whereas certain tests of the efficiency and safety of an alleged cure for tuberculosis now being made in this city are being rendered unsatisfactory, unscientific, and practically futile through the insistence of the originator of the alleged remedy on conditions which involve inadequate observation, inaccurate methods of administration, and the insistence on secrecy regarding the substances employed in some phases of the treatment; and whereas evidence is already at hand to show that the so-called remedy not only does not fulfil the promises of efficiency and safety under which its use was at first permitted in the city; but, on the contrary, during its administration many patients have suffered serious and unduly rapid progress of their disease; therefore be it resolved, that the use of living bacterial organisms in the inoculation of human beings for the prevention or treatment of disease shall be and hereby is prohibited in New York City until after full and complete data regarding the method of use, including a specimen of the culture and other agents employed therewith, and a full account of the details of preparation, dosage, and administration shall have been submitted to the Board of Health and until permission shall have been granted in writing by the Board for the use of the same.

In short, the New York City Board of Health has taken steps to interdict the use of a secret remedy. The Commissioners of the District of Columbia have concluded that the effectiveness of the Friedmann treatment of tuberculosis has not been sufficiently well established to warrant the granting without examination to Dr. Friedmann of a licence to practise medicine in the district.

The Foreign-born Population of New York City.

New York has the reputation of containing fewer inhabitants of native birth than any city in the United States. The New York Department of Health has estimated recently that on July 1st, 1913, the population of the city will amount to 5,372,983. It is likewise estimated that of the population only 15·8 per cent. is of native parentage while 38·8 per cent. is of foreign parentage though native-born, and 45·4 per cent. is foreign born.

The Danger of Wood Alcohol.

According to the New York State Committee on the Prevention of Blindness just issued, 13 persons in the state were blinded and four were killed during 1912 either by drinking wood alcohol on by inhaling its vapour. Wood, or methyl, alcohol is obtained by the dry distillation of wood. It has similar properties to ordinary alcohol, and is now produced in large quantities as a substitute on account of its cheapness due to freedom from duty. The report points out that although wood alcohol in as small a quantity as a teaspoonful has caused permanent blindness, and in larger quantities has caused death, this dangerous article is easily to be obtained from retail shops, chemists' shops, and grocery shops, often without a label or warning to indicate its poisonous nature. The charge is made that rectified wood alcohol may be easily mistaken for grain alcohol, and because of its resemblance is used frequently by ignorant or unscrupulous persons to adulterate cheap liquor. It is sometimes used in the preparation of bay rum, paregoric, flavouring extracts, Jamaica ginger, and in some patent medicines. The committee reported the case of a woman who became hopelessly blind as the result of drinking wood alcohol contained in paregoric which she had bought at a reputable chemist's shop. It is also stated in the report that inhalation of the vapour of wood alcohol may cause blindness. This accident may occur when using varnishes in which wood alcohol is used as a solvent for shellac; for example, in varnishing the inside of beer vats, and in varnishing lead pencils and furniture. Since industrial or denatured alcohol, untaxed grain alcohol made undrinkable by the addition of wood alcohol and benzine, can be used in practically all manufacturing processes in which wood alcohol is now employed, and is safer and no more expensive, there is no longer any legitimate reason, the committee states, for the present wide use of wood alcohol.

Campaign against Cancer.

The committee of laymen appointed in April to form an organisation to fight cancer in the United States met recently a committee of medical men and formed the nucleus of an association which is pledged to wage a campaign throughout the country. The plan was first suggested at the meeting of the Clinical Congress of American Surgeons last autumn, and now it has become an accomplished fact. The idea is to educate American women concerning cancer. Methods of publicity will include articles in women's magazines and journals of nursing, pamphlets distributed to the laity by medical practitioners, visiting nurses, and social workers, and by the agency of women's clubs.

Endowment of Medical Research.

One million dollars has just been given to the University of California by Mr. Hooper, of San Francisco, to establish an institution for research work in connexion with the medical department. Half a million dollars has been provided by the founder for a pension scheme in connexion with the Rockefeller Institute for Medical Research.

June 1st.

NOTES FROM SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

The Recruiting of Tropical Natives for the Rand Mines.

THE matter of the recruiting of tropical natives for the Rand mines has been before the House of Assembly since the Union fairly often. Mr. F. H. P. Cresswell's persistent and searching questions have doubtless done much to drag it into prominence, and the burning words of the Right Hon. Mr. J. X. Merriman, when the question was raised last year, are not likely to be forgotten. Early in May Mr. Cresswell placed upon the order paper notice that he intended to ask certain further questions, the main point of which was to ascertain whether the mortality figures hitherto supplied by the Native Affairs Department have included the deaths that have occurred in the compound of the Witwatersrand Native Labour Association. The Minister of Native Affairs, the Hon. Mr. Sauer, on May 8th stated the death-rate among natives recruited for the mines from territory north of latitude 22°, both on the mines of the Witwatersrand and in the compound of the Witwatersrand Native Labour Association. The death-rate in the compound of the Witwatersrand Native Labour Association was in March 229·6, and in April 214·6 per 1000 per annum. The mortality figures hitherto supplied by the Native Affairs Department did not include the death-rate in the compound. In order to give a true statement as to the rate of mortality, the mortality figures already published for 1910–11–12 should be increased by the following rates:—1910, 22·04 per 1000 per annum; 1911, 22·3 per 1000 per annum; and 1912, 23·0 per 1000 per annum. The total rate of mortality among tropical natives in the Transvaal and compounds prior to their employment on the mines of the Rand was as follows: 1910, 97·04 per 1000 per annum; 1911, 87·1 per 1000 per annum; and 1912, 70·6 per 1000 per annum. He had also received a return for January, February, March, and April of the present year giving the death-rate on the mines and works for those months. The rate was: January, 44·6; February, 64·1; March, 71·8; and April, 51·5. The mortality, including the compounds, was as follows: January, 115·1; February, 117·6; March, 118·5; and April, 73·4. He had inquired into the reason why the deaths in the compound were not included in the returns of mortality, and had come to the conclusion that there was considerable blame to be attached to the Witwatersrand Native Labour Association and the Native Affairs Department, but he did not think there were any improper motives. The fact remained, however, that very important information was not supplied, with the result that the information regarding these tropical natives, which had been published to the world, was entirely misleading. After having considered this matter very carefully the Government had come to the conclusion that they could no longer permit recruiting of these tropical natives. His opinion was that every motive required that the recruiting of tropical natives should be stopped. Under these circumstances the recruiting of natives from tropical countries for work in the Union would not in the future be allowed. It would be idle to attempt to minimise the gravity of the statement made by Mr. Sauer with regard to the appalling mortality prevailing amongst tropical natives brought to the Rand. It is clear that a state of things has existed of which the Government should, and the mining houses must, have known. That the Government is sensible of its responsibility in the matter is shown by the Minister's indictment of the department under his control. It is a remarkable fact that Ministers speaking in Parliament and on other public occasions have never referred to deaths which have occurred in this compound either amongst natives arriving for work or proceeding to their homes at the expiration of their contracts. This is the more remarkable because last year the Chamber of Mines, impressed by the serious mortality from pneumonia, engaged Sir Almroth Wright to visit Johannesburg to study on the spot the pulmonary affections to which tropical natives are so liable, and very extensive experiments have been carried out which it is understood were attended with fairly encouraging results, and on which Sir Almroth Wright has still to submit a final report. That the figures were not deliberately suppressed by the association would seem probable in view of the fact that the number of deaths occurring in its compound is published in the annual report and is supplied regularly to the Portuguese Government. It is fairly certain that had an effective department of public health been organised at the time of Union the death-rates among native labourers would have been properly recorded and the present scandal prevented. As it is, members of the public are now asking themselves whether the figures for the mine labourers from the Union are not also untrustworthy, and it is absolutely necessary in order to clear up misgivings on this point that definite statistics of those repatriated for health reasons before the completion of their contracts should be prepared and published. This is the more necessary because the abandonment of the recruiting of tropical natives means the eventual loss of a standing labour force of between 20,000 and 25,000 unskilled mine workers, which will have to be replaced from within the Union. The annual number of tropical natives recruited hitherto has been between 14,000 and 18,000 men. They have been drawn from the alluvial lowlands of Portuguese East Africa lying north of latitude 22°. This huge area is densely populated, and so far recruiting operations have been limited solely in deference to the alarming mortality which occurs amongst natives on their removal from the steaming lowlands of the tropics to the cold of the high veld of the Transvaal.

Health Conditions on the Rand Mines.

A prolonged debate on the health conditions on the Rand mines has also recently taken place in the House of Assembly. The debate arose out of a motion moved by another Labour Member calling for an amendment of the Miners' Phthisis Act of last session so as to afford more adequate and speedy relief to victims of that disease. Mr. Merriman urged that a Commission should be appointed to investigate the conditions under the chairmanship of an expert on mine sanitation to be brought out from Great Britain for the purpose. He pointed out that it was almost impossible to obtain impartial Commissioners in South Africa to deal with the question, and emphasised the need for a thorough and independent investigation. Mr. Chaplin, on behalf of the mines, pointed to the steps already taken to improve the state of affairs and the experiments being carried out by the mining industry with a view of checking the prevalence of pneumonia. He said that the employers of labour could do no more than welcome any investigation likely to lead to a solution of the problem. The Minister of Mines pointed out that since 1907 five Commissions have considered this subject, and the Tuberculosis Commission has not yet completed its investigations. Therefore, he considered any further inquiry at present was premature.

Medical Research.

The foundation-stone of the South African Institute for Medical Research was laid in Johannesburg a few days ago. The institute was started at the suggestion of the Witwatersrand Native Labour Association, which contributed £40,000 to the cost of equipment and the building of the institute. The Government had presented the ground, and the institute is to be carried on at the expense of the Government and Witwatersrand Native Labour Association jointly. The ceremony of laying the foundation-stone was performed by Sir Kendal Franks, and addresses were delivered by Mr. P. Ross Frames, Sir Kendal Franks, Dr. Watkins Pitchford, the director, and others.

South African Committee.

The South African Committee of the British Medical Association recently agreed with the Government to endeavour to induce the profession to undertake the examination of recruits for the defence force free of charge. This decision threatens to destroy for many years the usefulness of the committee, for the agreement has already been repudiated by several of the branches, none of which were consulted, and a number of strongly worded resolutions on the subject have already been passed. The matter will probably come up for discussion at the ensuing meeting of the South African Medical Congress in July at East London, when doubtless steps will be taken to render it impossible for the South African Committee to enter into agreements of this nature in the future without previous consultation with the branches.

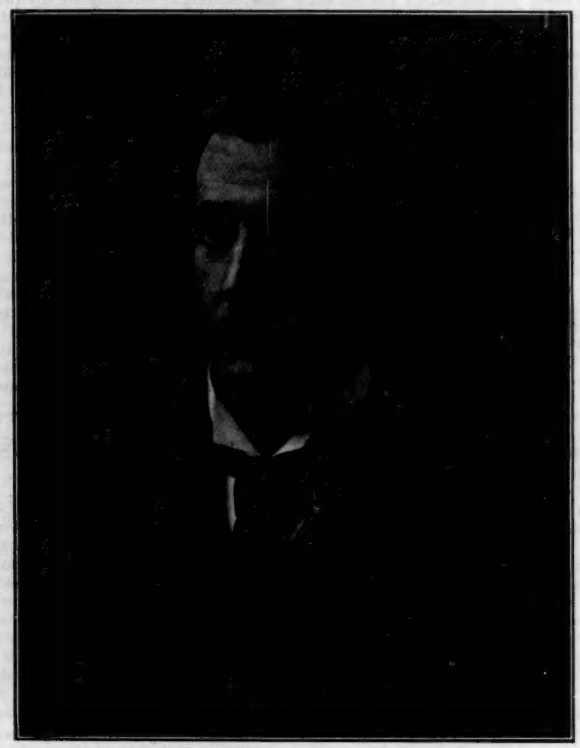
May 10th.

Obituary.

JAMES HENRY TARGETT, M.B., M.S. LOND., F.R.C.S. ENG.,

OBSTETRIC SURGEON AND JOINT LECTURER ON OBSTETRICS AT GUY'S HOSPITAL, ETC.

BY the death of Mr. J. H. Targett, which took place at his residence, Upper Wimpole-street, on May 26th, after a long illness, at the age of 51, the medical profession has lost a man of unrivalled judgment on morbid growths, and the gynæcological branch of medicine one of its most able members. The fund of information he had accumulated and carefully winnowed, as well as the conclusions he had formed, were ever at the disposal of anyone for the asking. His opinion upon a morbid growth might be taken as well-nigh final, and his reputation in this regard was recognised alike in other countries as in England. Few men have brought to the practice of a special department so wide and so varied a knowledge.



JAMES HENRY TARGETT, M.B., M.S. LOND., F.R.C.S. ENG.

Targett came from Wiltshire, where his father lived on his own farm and was held in high esteem. He was educated partly at the grammar school at Warminster, but being by no means in strong health, was placed under a tutor in Salisbury, whither he rode the six miles daily. He had already matriculated at the London University when he entered Guy's Hospital in October, 1878. Obtaining honours in anatomy and chemistry at the first M.B. in 1881, he took the M.B. in 1883 with honours in forensic medicine, and in the same year gained two of the prizes at his medical school. Having filled the positions of house physician and house surgeon, and taken the degree of Bachelor of Surgery with honours in 1885, he was appointed surgical registrar for two years, and while holding this appointment he obtained the Fellowship of the Royal College of Surgeons of England. Having taken the Mastership in Surgery in 1887, he was in the same year appointed assistant curator of the museum at Guy's Hospital, and the next year pathological assistant at the College of Surgeons, and after two years pathological curator. This latter post he held for seven years, so that he served the College for nine years. While holding this appointment he was elected a demonstrator of anatomy at Guy's Hospital, and continued to teach in this department for six years. With these appointments he also discharged the duties of assistant surgeon to the Evelina Hospital for Children. From 1895 he taught practical surgery and morbid histology until 1897, when he was appointed obstetric registrar and tutor, and in the following year assistant obstetric physician. He held this post for five years and combined that of surgeon to out-patients to the Samaritan Free Hospital for Women. To qualify himself further for his work he spent a good deal of time at Queen's Charlotte's Hospital, and on the retirement of Dr. Galabin in 1903 Targett was promoted to the full position of gynæcological surgeon to Guy's Hospital, sharing these duties with the late Dr. Horrocks.

The soundness of his work had become so much appreciated that he was offered, and accepted, the gynæcological position at the Bolingbroke Hospital, then coming into prominence, and also at St. John's, Lewisham. These three positions he continued to occupy at the time of his illness. While serving the College of Surgeons Targett delivered the Erasmus Wilson lectures in 1893-94-95 and edited six appendices to the catalogue of the museum.

He was elected a Fellow of the Obstetrical Society in 1891, and made some 25 contributions to the Transactions in the next six years, and here his wide pathological knowledge was of conspicuous service. Amongst other communications may be mentioned the article in Quain's Dictionary of Medicine on "Diseases of the Fallopian Tubes," papers in the Guy's Hospital Reports, and numerous papers and reports in the Transactions of the Pathological Society. From 1901–06, and again from 1908 to the time of his illness, he was an examiner in midwifery at the Conjoint Board, and from 1900–02 served on the Board of Examiners for Midwives. In 1910–11 Mr. Targett was joint secretary of the Obstetric and Gynæcological Section of the Royal Society of Medicine. From the foundation of the Clinical Research Association up to three or four years ago Targett examined the morbid growths, writing out all the reports himself. This work never ended and occupied much of his evenings, so that he allowed himself little relaxation from work. Such is a brief summary of the public work of this busy life, and when there are added the demands of a rapidly increasing practice the strain upon anything but a strong physique will be appreciated.

Targett was a clear and concise writer; he would in a few words give the essential features of a specimen, and many an important decision was based upon his reports. His opinion in difficult cases was always well founded and courteously given, and his well-balanced judgment, combined with his sound pathological knowledge, gave special value to his report upon gynæcological cases As an operator he was accurate and sound, and his work in this regard was of a high order. He was a loyal colleague and he will be missed at many committees, for he took his full share of the work. He was a kind friend, and awakened a genuine regard in those with whom he worked, for there was no self-seeking in him. Nothing mean or poor was ever heard of Targett, and he was always ready to help in a difficult case without regard to fee.

As a teacher, especially in his early years, Targett was most successful, and many appreciative letters have been received by his widow from old pupils. In later years he was disinclined to teach the rudiments, and dull men perhaps bored him. The able men, those who had eyes to see, learnt much from him, and he never wearied in answering questions, though lacking the faculty of putting questions himself.

Targett was perhaps hard upon himself and overworked. The loss of his only child at the end of 1911 was a great blow to him, and he felt he must work the harder to bear this loss. In September of last year he came home after his hospital work with a temperature of 103° F. and very ill. This proved the beginning of a long illness—ulcerative endocarditis—which he bore with great fortitude, never giving up hope till the final blow of hemiplegia fell in April, and then he realised that his work was done, and he longed, as he put it, "to be taken home." Under the devoted care of Dr. Frederick Taylor, his old teacher and colleague, associated from time to time with other friends, everything was done to modify or arrest the progress of the malady without avail.

LYTTLETON STEWART FORBES WINSLOW, M.B., LL.D. CAMB., M.R.C.P. LOND., D.C.L. OXON.

Dr. L. S. Forbes Winslow, who was well known in lay circles as an alienist, died on Sunday last, June 8th, in his seventieth year. Educated at Rugby and Cambridge he took his medical degree in 1870, and thereaftet worked with his father, Dr. Forbes B. Winslow, as an authority in insanity. He managed private asylums for many years, and was for a time lecturer on insanity and mental disease at Charing Cross Hospital. He made many appearances in the witness-box as an expert alienist, and wrote semi-popular books on, among other things, the connexion between crime and insanity, and the power of hypnotism. As a young man he had been a prominent athlete.

OSCAR WILLIAM CLARK, M.B. OXON., M.R.C.S. ENG.

Dr. Oscar William Clark, of St. Luke's House, Gloucester, one of the best known and highly esteemed physicians in the city and county of Gloucester, died suddenly on June 7th within the precincts of Gloucester gaol, of which he had been for many years the medical officer. Dr. Clark, who was 58 years of age, was educated at Oxford, and received his early medical training at St. Bartholomew's Hospital. He took his B.A. degree with a first class in Natural Science in 1877, and his M.A. and M.B. degree in 1882. In 1881 he became a Member of the Royal College of Surgeons of England. He was for a time house physician and house surgeon at St. Bartholomew's Hospital, and afterwards resident clinical assistant at the City of London Hospital for Diseases of the Chest. He was at the time of his death senior physician at the Gloucestershire Royal Infirmary, with the medical work of which he had been prominently associated since early in 1885, when he was appointed to fill the vacancy on the honorary staff caused by the death at the end of the previous year of Dr. Buchanan Washbourn. He was also medical officer at Gloucester gaol and certifying surgeon under the Factory Acts in the city. He was the senior medical officer to the Gloucester Provident Dispensary, upon the medical staff of which he had been for the past 24 years. He had occupied the position of president of the Gloucestershire branch of the British Medical Association, and at the time of his death was the chairman of the Gloucester District Nursing Society. Amongst other positions which he held was that of a governor of the Gloucester United Endowed Schools, and he was a valued and useful member of the Public Library Committee. He was a prominent member of the Bristol and Gloucestershire Archæological Association, on the council of which he had been for many years, and he belonged also to the Cotteswold Naturalists Field Club. A man of exceptional culture and refined tastes and remarkably well read, he was a charming conversationalist and a most informing "guide, philosopher, and friend." He leaves a widow and two daughters. In accordance with his wish his body was cremated.

CHARLES DALLEY NUTTALL, M.R.C.S. ENG., L.R.C.P. LOND.

Mr. C. D. Nuttall, of London-road, St. Albans, died after a long illness on June 1st. He was the eldest son of the late Dr. Henry Nuttall, of Leicester, and was descended from a family which has been connected with the practice of medicine for several generations. His medical education was received at St. Bartholomew's Hospital, and he obtained the conjoint diploma in 1884. Among his early appointments were those of senior clinical assistant at the City of London Hospital for Diseases of the Chest and surgeon to the Leicester Provident Dispensary. At one time he had a large practice in Leicester, which, however, he was compelled to relinquish on account of failing health. Later he practised in St. Albans, but three years ago his health again began to fail, and he had once more to relinquish work. As a medical student he was one of the best quarter-mile amateur runners of his day, and won many prizes, including the inter-hospital challenge cup for his hospital. He was an accredited judge for the N.C.U. and other athletic associations. He was also well known in the hunting field. He married the eldest daughter of the late Dr. J. St. Thomas Clarke, of Leicester, who survives him.

HERBERT COLLIER, M.D. BRUX., M.R.C.S. ENG., L.R.C.P. LOND. & EDIN., L.S.A. LOND.

THE death occurred suddenly at his residence, Sea-road, Bexhill, Sussex, on May 27th, of Dr. Herbert Collier. Apparently in his usual health, he visited his patients on the morning of the day of his death, and in the afternoon he was taken suddenly ill and died, the cause of death being angina pectoris. He studied at St. George's Hospital, London, and took the L.S.A. diploma in 1875. In the same year he obtained the L.R.C.P. Edin. and the L.M., and in 1877 the M.R.C.S. Eng. and L.R.C.P. Lond. He proceeded to the M.D. degree in Brussels in 1882, being first *avec grande distinction* in the 1st, 2nd, and 3rd doctorats. For many years he practised at Yarmouth, where he was highly esteemed both in public and in private life. He took a deep interest in educational work, and for a number of years formed one of the educational authority at Yarmouth. He was also medical officer for the union there, and held numerous other appointments. Leaving Suffolk, he resided in Cornwall for some time, but indifferent health necessitated his going to live at Bexhill, where he took up his residence about six months ago. Dr. Collier was a Fellow of the Royal Geographical Society, the Norwich Medico-Chirurgical Society, and the Great Yarmouth Medical Ethical Society. He was a contributor to THE LANCET and other medical journals. Dr. Collier leaves a widow and family to mourn their loss.

THE NATIONAL INSURANCE ACT.

LONDON INSURANCE COMMITTEE.

Distribution of Unallotted Funds.

THE question of the distribution of the £34,000 accumulated in respect of 400,000 persons who have not chosen a doctor was discussed for some time by the London Insurance Committee at a special meeting on June 5th.

Following the withdrawal of the proposals for distribution reported in THE LANCET of May 31st, p. 1564, the Medical Benefit Subcommittee recommended that the Insurance Commissioners be asked to take the opinion of the law officers of the Crown on the whole question, the following points being suggested for legal consideration:—

(1) Is the Committee compelled, or has it the right, to distribute the money amongst doctors on the panel before April 14th, in view of the fact that no allocation of unaccepted persons, either by number or name, has taken place?

(2) If the reply to (1) is in the affirmative, has the Committee power to adopt all or any of the methods suggested in Circular 10 I.C?

(3) If the replies to (1) and (2) are in the negative, should the distribution be made after the allocation of the residue, and then only to doctors on the panel during the first quarter, or to all the doctors on the panel at the time of allocation?

(4) If all these replies are in the negative, in what way should the £34,000 be dealt with, and will the Committee be entitled to distribute the full amount per insured person in spite of the fact that 2s. 6d. of the total depends, not on an Act of Parliament, but on a resolution of the House of Commons?

Mr. O. E. WARBURG, chairman of the Medical Service Subcommittee, moved an amendment in favour of the money being carried to a special arrangements fund for the benefit of the insured persons concerned, whom he held to be entitled to the value of the treatment for which they had paid and not received.

Mr. EVAN JONES seconded.

Dr. LAURISTON E. SHAW urged that it would be ridiculous to say that the insured persons who had not chosen a doctor had received nothing during the four months. They had received "cover," and the doctors had

taken the risk of sickness, for which they should receive payment.

Dr. H. H. MILLS remarked that the majority of the 400,000 persons were young people who probably would not require medical attendance during the first months, or even years, of the working of the Act. It was the essence of the principle of insurance that this money should be paid to the doctors, and to delay the distribution was an injustice to the medical profession.

Mr. F. BRIANT suggested that the persons who had not selected a doctor were mainly of the careless and indifferent class that had made the working of the Act so difficult. The amendment proposed to place a premium on carelessness and indifference, and to give special advantages to this class which were not proposed in respect of those who had chosen a doctor and who, equally with those who had not made a selection, had not required medical attendance.

Mr. EDWARD SMITH described the amendment as drawn up in a hurry and ill advised. He wondered how Mr. Evan Jones would like to ask his professional brethren to relinquish all the other funds they had received in respect of people who had not required treatment, but who had come on to a doctor's list. Under this proposal all the principles of insurance went by the board.

Mr. WARBURG intimated that as the feeling of the Committee was obviously against him he would withdraw the amendment.

The questions for submission to the law officers were then approved.

To a recommendation of the subcommittee that the further consideration of the distribution of the accumulated funds be postponed until the opinion above referred to had been received, Mr. H. KINGSLEY WOOD moved an amendment that no distribution be made until after the complete assignment of insured persons amongst the doctors on the panel. Mr. Wood said that this question was causing a great deal of heartburning amongst medical men in London, and he thought it only right that the Insurance Committee should declare its intention not to make any distribution until the complete assignment had been made.

The CHAIRMAN (Mr. J. A. DAWES, M.P.) suggested that the amendment rather prejudged the issue to be submitted to the law officers. On receipt of legal advice the whole question would be open again for discussion.

Mr. WOOD agreed to withdraw the amendment and the subcommittee's recommendation was approved.

Extension of Contracting Out.

The proposals of the Medical Benefit Subcommittee reported to the last meeting of the Insurance Committee[1] for the improvement of the Insurance Medical Service in London by the extension of contracting out, were considered by the Committee.

Mr. F. COYSH, on behalf of the General Purposes Subcommittee, moved an amendment that all applications be considered on their merits. He said it was felt that the Committee should have a perfectly free hand, but at the same time he hoped it would be understood that there would be no factious opposition; all persons who made out a clear and reasonable case would have their applications granted.

The amendment was agreed to, and the report of the subcommittee as amended was then approved.

THE RECOGNITION OF HERBALISTS.

At a recent meeting of the Worcestershire Insurance Committee a discussion arose on the application of a man who desired to contract out of the Act on the ground that he had a conscientious objection to "allopathic treatment" and desired to make his own arrangements with a herbalist. The General Purposes Committee left the case to the decision of the committee without making any recommendation.

Mr. J. WILLIS BUND, the chairman, read the application, and the signed statement of a Worcester herbalist, undertaking, in the terms of the Act, to give medical attendance "not inferior in quality or extent to that provided under the arrangements of the Insurance Committee." Mr. Willis Bund said that the application raised the important point as to whether they should select any person other than a registered medical practitioner. He believed that Mr. Masterman gave a reply in the House of Commons that it could legally be done, but he (the chairman) did not profess to be able to give an opinion.

Dr. P. A. RODEN asked if it would not be well to ask a coroner if he would accept a certificate from such a man?

The CHAIRMAN said that the suggestion was a little unkind, but Dr. RODEN said that people died even after being attended by a herbalist.

Dr. C. L. HAWKINS pointed out that a herbalist could not give a death certificate, and the question would arise who would have to pay a medical man for giving one in case of a fatal termination. The committee were administering an Act of Parliament, and how could they allow an insured person to make arrangements under the Act with a person who had no legal status.

Mr. A. O. HOLBECHE asked what qualification the Worcester herbalist had to give the "medical attendance" mentioned in the Act. An insured person might have to call in a doctor, and in that case who would pay the doctor? He failed to see what qualifications for the work a herbalist possessed.

Mr. PARKES said that persons did not always suffer from minor complaints. Supposing the applicant for permission to contract out required an operation, it would be illegal for the herbalist to perform it. Whatever their feelings might be sympathetically, they must see that nobody was appointed who was not a qualified medical practitioner. He moved that the application be not granted.

Mr. S. WRIGHT (Oldbury) mentioned the case of a man who was always treating himself to whisky for rheumatism. He rubbed it outside and also used it internally. If they paid for herbs for one man, why not whisky for another? The speaker added, amid loud laughter, "We shall have to go to practical gentlemen in case we die, or in case an operation is needed, so we might as well make one job do for the lot."

The Rev. J. W. K. BROCKBANK said he must enter his protest against refusing the application. They would be compelling all the insured to accept, without the slightest option, one form of medical benefit. He added that the Society of Medical Herbalists were applying for a charter, and doubtless they would get it. They ought to have regard to homœopathy and herbalism in granting these exceptions to the Act. If a man had a conscientious objection to doctors the committee ought not to stand in his way.

The resolution refusing the application was carried with two dissentients.

MIDDLESEX INSURANCE COMMITTEE.

At a meeting of the Middlesex Insurance Committee on June 2nd the Sanatorium Benefit Subcommittee recommended:—

That no insured person receiving domiciliary treatment be given tuberculin or other similar substance without the consent of the tuberculosis officer.

Mr. H. B. BRACKENBURY said that if the tuberculosis officer had advised that a particular case was one for domiciliary treatment, it seemed to him as a practitioner to be a monstrous thing to say to that practitioner, "Yours is the responsibility for treating this patient, but you shall not use this or that drug in giving the treatment." He imagined the object of the proposal was that doctors on the panel should not adminminster large doses of an expensive drug, but at the same time, if a patient was receiving treatment from a doctor in his own house that doctor must be allowed to say what drugs he would use in the best interests of the patient. No doubt from the nature of the case tuberculin would not usually enter into the treatment of domiciliary cases, and doubtless the doctor would avail himself of the services of a tuberculosis officer, but the proposal of the subcommittee was quite out of the question, and placed medical practitioners in a position no self-respecting medical man should be expected to acquiesce in. Mr. Brackenbury moved the reference back.

Mr. W. REGESTER seconded it, and suggested that the insertion of the words, "without consultation with the tuberculosis officer," would meet the views of Mr. Brackenbury.

Mr. BRACKENBURY was afraid he could not accept that.

Mr. REGESTER and Mr. W. S. GLYN JONES, M.P. (the chairman), appealed to the chairman of the subcommittee to withdraw the recommendation in order to avoid friction with the medical profession, and the report was then by leave withdrawn.

[1] THE LANCET, May 31st, p. 1564.

THE NATIONAL MEDICAL UNION.

A general meeting of the National Medical Union was held at the Victoria Hotel, Manchester, on June 4th. The business dealt with included the adoption of rules and the consideration of some points in the future policy of the Union. In the absence of Mr. G. A. Wright, F.R.C.S. (the President), Mr. W. Coates, C.B., D.L., occupied the chair. There was a good attendance of members. Dr. F. Porter, honorary secretary of the Edinburgh Medical Guild, was present as a representative of that body.

The Executive Committee's report and the honorary treasurer's statement were read and adopted. The former records the steady growth in the membership of the Union, and testifies to a disinclination among men on the panels to continue in the service owing to their conviction of the impossibility of carrying out satisfactory and honest work under the Act. Numbers of letters from different parts of the Kingdom have been received in which the writers express their hope of being able to resign service at an early date, and their intention in that event of joining the Union.

The adoption of the draft rules prepared by the Executive Committee was moved from the chair, whereupon an important discussion took place in regard to the retention of membership of the Union by those medical men who accept service on statutory committees under the National Insurance Act. By the rules service in any capacity under the Act would be a bar to membership of the National Medical Union.

Dr. R. H. TROTTER (Huddersfield) moved an amendment to the effect that only those "who accepted service on any panel or list, or in any position of profit to which they have been appointed by any Insurance Act authority," should be excluded from membership.

Dr. PORTER said that the Edinburgh Medical Guild, the members of which comprise a majority of the practitioners in and around that city, is strongly opposed to the acceptance of work of any character in connexion with the Act.

The amendment was lost, and the rules as drafted were adopted.

It was resolved that a complete list of members of the National Medical Union should be printed and circulated among the members, and that as full a list as possible should be compiled of all non-panel practitioners in the kingdom.

The Executive Committee was instructed to consider the measures to be taken to inform the insured people of the validity of non-panel certificates, and to check the action of insurance agents throughout the country who are instructing the insured patients that they must go to panel doctors.

It was also decided that communications should be sent to all societies of non-service doctors with a view to the affiliation of such bodies with the National Medical Union, so as to secure concerted action.

Other matters bearing on the future policy of the Union were discussed, and the meeting closed with a vote of thanks to the chairman.

THE INSURANCE DIFFICUTY IN WALES.

As was expected, the Welsh county councils and the Association for Erecting a National Memorial to King Edward VII. have failed to agree on the administration of the sanatoriums for tuberculosis under the Act. The county councils consider that the association is claiming a position of independence which cannot be sanctioned by the Local Government Board.

ROYAL SOCIETY OF ARTS: SWINEY PRIZE.—In January, 1914, the Royal Society of Arts will award the Swiney Prize, which is a cup of the value of £100, and money to the same amount, for the best published work on General Jurisprudence. The prize was founded by Dr. George Swiney, and is awarded on every fifth anniversary of his death, the award being made jointly by the Royal Society of Arts and the Royal College of Physicians. The cup now given is made after a design specially prepared in 1849, for the first award, by D. Maclise, R.A. Any person desiring to submit a work in competition, or to recommend any work for the consideration of the judges, should do so by letter, addressed to the secretary of the society, John-street, Adelphi, W.C.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berne:* Dr. Langhans, professor of pathological anatomy, is retiring before the commencement of the winter session.—*Erlangen:* Dr. Brock has been recognised as *privat-docent* of Otology and Laryngology.—*Heidelberg:* Dr. O. Cohnheim has been offered the charge of the Physiological Department of the Eppendorf Hospital, Hamburg.—*Königsberg:* Dr. C. Kaiserling, extraordinary professor in Berlin, has been appointed Professor of Pathological Anatomy, in succession to Dr. Henke.—*Leipsic:* Dr. Friedr. Albin Hoffman, professor of medicine and director of the University Policlinic, has been granted the title of Exzellenz by the Saxon Government.—*Naples:* Dr. Ernesto Carace has been recognised as *privat-docent* of Pædiatry.—*Poitiers:* Dr. Coulongeat has been promoted to the chair of Natural History.—*Prague (German University):* Dr. A. von Tschermak, professor of physiology in the Vienna Technical University, has been offered the chair of Physiology, in succession to Dr. Franz Hofmann, who goes to Königsberg.—*Rome:* Dr. Alberto Salmon has been recognised as *privat-docent* of Neurology, Dr. Alfonso Maurizi and Dr. Stefano Rebaudi as *privat-docenten* of Midwifery and Gynæcology, and Dr. Arrigo Piperno as *privat-docent* of Odontology.—*Tübingen:* Dr. K. von Korff, *privat-docent* of anatomy in the University of Kiel, has been offered the Prosectorship of the University Anatomical Institute.—*Würzburg:* Dr. J. Schneider, of Milwaukee, the eminent American ophthalmic surgeon who recently gave £5000 to the Eye Clinic, has just sent £500 more for prizes to students.

THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH: PENSIONS FOR WORKERS.—Pensions for its members and associate members have been provided by the governing boards of the Rockefeller Institute for Medical Research, and have been financially secured by the generosity of Mr. John D. Rockefeller, who has with this purpose in view increased the endowment of the institute by a gift to it of securities amounting to about $500,000 in value. The pension rules which have been adopted provide three-quarters pay pensions for members of the institute retiring at the age of 65 after 15 or more years of service, and pensions of from one-half to three-quarters of full pay, according to the length of service, for members and associate members who retire at 60 years of age. There is also a provision for total disability after ten years of service, and for widows and orphaned children, at one-half the scale upon which members of the staff are pensioned.

LITERARY INTELLIGENCE.—Mr. Henry Kimpton announces for early publication the following works:—"Tuberculin in Diagnosis and Treatment," by Francis M. Pottenger, M.D., illustrated. "Epidemic Cerebro-spinal Meningitis," by Abraham Sophian, M.D., illustrated. "The Modern Treatment of Nervous and Mental Diseases," by British and American authors, edited by William A. White, M.D., and Smith Ely Jelliffe, M.D., in two volumes, illustrated. "Asthma and its Radical Treatment," by James Adam, M.D., F.R.F.P. & S. "Handbook of Diseases of the Rectum," by Louis J. Hirschman, M.D., second edition, revised and enlarged, illustrated.—Messrs. Smith, Elder and Co. announce for early publication a work by Mr. W. McC. Wanklyn, formerly medical superintendent of the Small-pox Receiving Stations and River Ambulance Service of the Metropolitan Asylums Board, entitled "How to Diagnose Small-pox."

SECOND GUILDHALL SCHOOL CONFERENCE.—The Schools Committee of the National Food Reform Association, which is making arrangements for the Conference on Diet, Cookery, and Hygiene in Public Elementary Schools and Public and Philanthropic Institutions for Children and Adolescents, to be held at the Guildhall on June 30th and July 1st, is issuing invitations to representatives of education committees, Scottish school boards and parish councils, boards of guardians, school medical officers, boarding-out, canteen and care committees, teachers' organisations, boards of managers, heads of schools and institutions, public and

philanthropic, with their staffs, social workers, and educationists. Copies of the programme may be obtained by sending a stamped addressed envelope to the secretary, Schools Committee, 178, St. Stephen's House, Westminster, S.W.

THE recent anonymous gift to the Middlesex Hospital for the erection of a new block to be devoted to the study of hygiene and pathology has been increased by the donor from £10,000 to £15,000.

LIVINGSTONE COLLEGE: COMMEMORATION DAY.—Commemoration Day was celebrated at the College on June 7th, when a large and representative gathering of friends of missions was present to do honour to the memory of Dr. David Livingstone, after whom the College is named, and whose centenary is being celebrated this year. A reception was given by Mrs. C. F. Harford and the Principal of the College, who in his subsequent address stated that a valuable piece of land had been presented to the College by Mr. Robert Barclay, and £490 had been received towards the Centenary Fund. Speeches were also made by the Right Rev. Bishop Montgomery, the Rev. A. du Plessis, and by Sir A. Pearce Gould, who pointed out that careful distinction should be made between medical missionaries, who must have a full qualification, and students who received elementary medical training, yet the latter was of vital importance, particularly in order that the missionary should safeguard his own health. He would like every missionary to have nine months at the College before going abroad, and he would advise missionaries on furlough to undergo the training. There was no department of medicine, he said, which was advancing with more rapid strides than the knowledge of tropical diseases. Tea was afterwards served in the beautiful grounds of the College. An illustrated souvenir of the Livingstone Centenary, containing coloured reproductions of the portraits in the possession of the College, has been issued, and copies have been accepted by their Majesties the King and Queen, by H.R.H. the Prince of Wales, and by Her Majesty Queen Alexandra. These souvenirs, as well as postcards, were on sale for the Livingstone Centenary Fund. It is desired to raise a fund of £10,000, £3500 to clear off a mortgage on the property, £1000 to effect further improvements, and £5000 to form the nucleus of an endowment. Among the visitors were Miss Moffat and Mrs. Oswell Livingstone, two relatives of the famous medical explorer and missionary.

PHARMACEUTICAL SOCIETY.—At the June meeting (at which officers for the year are appointed) of the Council of the Pharmaceutical Society a letter was received from Mr. Richard Bremridge, secretary and registrar, intimating that he did not ask to be reappointed. A motion was carried unanimously accepting with regret Mr. Bremridge's resignation and expressing appreciation of his services. The council voted Mr. Bremridge a pension of £400 a year for a period of seven years, and £300 a year at the end of that period. Mr. Bremridge entered the services of the Pharmaceutical Society as assistant to his father, who was then secretary, in 1868, a few weeks before the passing of the Pharmacy Act, and one of his first duties was to compile the first register of chemists and druggists. On the retirement of his father in 1884 he became secretary and registrar. He retires with the good wishes of all who know him after fulfilling his duties zealously and tactfully. The council has appointed in his place Mr. W. J. Uglow Woolcock, pharmaceutical chemist and barrister-at-law. Mr. Woolcock has been in the service of the society for several years, and has proved his value as an organiser; as secretary of the Pharmaceutical Standing Committee on Insurance and a member of the Advisory Committee to the National Insurance Commissioners, he has played an important part in the development of the pharmaceutical service under the Insurance Act. The new President elected at the council meeting, as successor to Mr. C. B. Allen, is Mr. Edmund White, B.Sc., F.I.C., who has also interested himself in insurance matters; as an old member of the Board of Examiners of the Pharmaceutical Society he is particularly suitable as head of the society during a period in which educational matters are likely to be under consideration. The new Vice-President is Alderman A. S. Campkin, of Cambridge.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Select Committee on Patent Medicines.

THE Select Committee on Patent Medicines of the House of Commons on Thursday, June 5th, heard some interesting evidence in regard to the scope of the Sale of Food and Drugs Acts. Sir HENRY NORMAN was in the chair.

Dr. A. W. J. MCFADDEN, Chief Inspector of Foods under the Local Government Board, stated that 234 local authorities were entitled to appoint public analysts and sampling officers to see that the Food and Drugs Acts were properly observed. In every case such appointments had been made, but, nevertheless, there was a lack of control over patent and proprietary medicines, as these were exempted from the scope of the Acts. Action accordingly could not be taken in regard to them. During the last seven years the proportion of adulteration amongst the samples of drugs taken had slightly increased. Suppose that a person asked for X's pills, he would, of course, get what he asked for. Unless the Sale of Food and Drugs Acts were extended so as to require a full declaration of the nature and amount of the ingredients, which would have the force of a warranty, a basis of control in matters relating to the nature, substance, and quality of proprietary medicines could not be secured. If it was provided that the formula should be put on the label, then the article could be analysed under the Acts, but even then the law would require some extension so as to get rid of the disability under Section 6. Then, of course, the analysis would be only directed as to certain drugs specified on the label.

The CHAIRMAN: Do you suggest that any change in the law in this respect would necessarily involve the creation of some central body to exercise a censorship?

Dr. MCFADDEN: As regards this description I think so. It would be almost impossible for this to be controlled by the local authorities.

Mr. GLYN JONES: What do you mean by "this description"?

Dr. MCFADDEN: I mean exaggerated claims.

The CHAIRMAN: It would be necessary then that the legislature should make a fresh start and create a new body?

Dr. MCFADDEN: Yes. In answer to further questions the witness admitted that the local authorities took different views of their duties under the Food and Drugs Acts both as to the amount of work which they did and as to the kind of things to be sampled. What might be safely done by a trader in one district would involve him in a prosecution in another.

Mr. GLYN JONES: Supposing the Committee were to recommend some fresh legislation, do you think it would be a wise thing that the administration of the new law should be left to all these 234 local authorities?

Dr. MCFADDEN: That is a very difficult question to answer. He went on to say that there was a great deal of work to be done in bringing about uniformity in practice under present conditions. At present it was left to the public analyst to say whether an article was adulterated or not. He admitted that there were local authorities which objected to spend money on the administration of the Acts, and the matter was not in the hands of the analysts. If it was desired to confer powers to prohibit altogether the use of certain objectionable statements on labels and in advertisements and to control the use of statements which, though not so objectionable, might still be false or misleading, the primary responsibility would have to rest with some central authority to which owners of proprietary articles would have to submit their advertisements or which would deal with representations received.

Mr. GUY STEPHENSON, Assistant Director of Public Prosecutions, gave evidence to the effect that the Public Prosecutor was now prepared to put forward suggestions for the purpose of facilitating prosecutions relating to patent medicines. A staff of inspectors or other officials might be created to look out for offences in regard to patent medicines and to make a systematic search of the newspapers for extravagant or objectionable claims for medicines. They might purchase samples and submit them for analysis. Some supervising authority would decide whether a prosecution should be undertaken.

The committee adjourned.

Milk and Dairies Bill.

Considerable opposition is taken in the House of Commons to the Milk and Dairies Bill. It has not yet received a second reading, and as the list of departmental Bills before the House is long, and several measures of an extremely controversial political character are also awaiting consideration, the delay does not improve its chances of reaching the Statute Book this year. Mr. WEDGWOOD has given notice that he will move to reject it. There are seven reasoned amendments standing on the notice paper, six of these being in identical terms. Mr JAMES MASON proposes to move "That this House declines to proceed with a Bill which proposes to deal with disease in animals and milk only when that disease has reached a dangerous point, and which suggests no efficient steps to attack the evil at its source, and by gradually eradicating tubercle from our dairy herds, to ensure the

supply of pure milk at prices which would not be prohibitive to the poorer classes."

The other amendments are designed to assert the dairyman's right to further protection. They are all in these terms: "That this House, while welcoming any proposal calculated to secure a purer and more wholesome milk-supply for the public, considers the taking away from dairymen of the defence of warranty will not have this effect, but is likely to lead to the conviction of many innocent persons."

HOUSE OF LORDS.

MONDAY, JUNE 9TH.

Sanitation in India.

Viscount MIDLETON called attention to the Resolution of the Government of India (Sanitary) dated August 19th, 1912, and to the subordination of the Sanitary Commissioner with the Government of India to the Director-General of the Indian Medical Service. He said that if their lordships considered the problems of sanitation in the recently published Blue-book in regard to the civil population, there were some things which must fill them with concern. To-day the question of sanitation occupied the unique position in the India Office of being the only subject on which there was no advisory connexion with the Viceroy. The scheme detailed in the papers lowered the status of the head of the department, but added eight deputy Sanitary Commissioners, making 29 for the whole of India. These 29 officials compared with 1700 medical officers of health in this country. He would urge the Government to recast the whole of the decisions of the last two years with regard to this question. On four points he asked the Government to give their special attention. In the first place, he would ask that they should put the head sanitary officer in an autonomous position subject to the Government which he served. In the second place, he would press that the sanitary authority should decide what education should be given as far as sanitation was concerned. Then, thirdly, the Government should organise a comprehensive executive sanitary staff which would be of the same race and caste as the people to be dealt with, with an experienced and sympathetic European administrative staff. The fourth point was that the Secretary of State should re-establish the Sanitary Advisor to himself at the India Office.

The MARQUIS of CREWE (Secretary of State for India), in replying, said that it was true that the present system fell far short of being a great independent sanitary department supreme over the provincial governments and forming one of the main departments of the Government of India. However, the noble Viscount had passed lightly over the difficulties that were presented of enforcing sanitary conditions in India on account of social and religious prejudices. If some of his sanitary friends were let loose in India they would in a short period of time produce a state of revolution compared to which the mutiny of 1857 would be child's play. It was, however, permissible to look forward to a time when there would be a definite local sanitary service all over India. At present only a certain amount of money was in the hands of the Government, and too much ought not to be spent on mere machinery and the payment of officers, but they ought to devote a considerable part of it to works for the improvement of the public health. He announced that four more officers were to be added to the eight new deputy Sanitary Commissioners, and also some additional medical officers were to be appointed.

Lord SYDENHAM said that the contact between medical and sanitary science was very close at many points, and therefore he felt that there was great force in the contention that these matters should not be divorced at their head. He also thought that it was desirable to encourage more Indian women to enter the profession of medicine. It was absolutely necessary to carry on continual scientific investigation in India itself.

It was agreed that papers should be presented on the subject of the debate.

HOUSE OF COMMONS.

WEDNESDAY, JUNE 4TH.

Maternity Benefit.

Answering Mr. GODFREY LOCKER-LAMPSON, Mr. MASTERMAN (Secretary to the Treasury) said: Under Section 12 of the National Insurance Act maternity benefit is not payable to or in respect of a woman while she is an inmate of a Poor-law institution. The sum which would otherwise have been payable must, however, be paid to or applied in whole or in part to the relief or maintenance of her dependents, if any; and in so far as not so paid or applied is payable to the woman or her husband, as the case may be, when she leaves the hospital, either in kind or in instalments or in a lump sum as the society may determine.

Commencement of Sickness Benefit.

Mr. GODFREY LOCKER-LAMPSON asked the Secretary to the Treasury whether he had received a resolution passed unanimously at a meeting of secretaries of Foresters' courts asking him to provide in the forthcoming National Insurance Act amending Bill that sickness benefit should be payable from the first day of certified illness, provided that the illness was not of less duration than three days.—Mr. MASTERMAN replied: The answer is in the affirmative.

Actuarial Basis of Sanatorium Benefit.

Mr. GODFREY LOCKER-LAMPSON asked the Secretary to the Treasury whether the amount fixed for the provision of sanatorium benefit under the National Insurance Act—viz., 1*s.* 3*d.* per head—was the result of actuarial advice; if so, upon what basis this amount was arrived at; whether it was the actual experience of Friendly Societies or the experience of sanatoria and kindred institutions; and whether he had the advantage of comparing the sum fixed under the Act with the actual cost to any society or institution in which the members were admitted only after medical examination.—Mr. MASTERMAN said in reply: The experience in the sphere of tuberculosis as distinct from other diseases possessed by Friendly Societies and the authorities of sanatoria before the passing of the Act was too limited to be of much practical value in arriving at an estimate of the amount required to be provided by the Act for sanatorium benefit. A further difficulty was that tuberculosis was at the time not a notifiable disease. The figure was arrived at by a calculation based on the mortality statistics and such experience as was available of the cost of treatment.

THURSDAY, JUNE 5TH.

Ireland and the Mental Deficiency Bill.

Mr. BIRRELL (Chief Secretary to the Lord Lieutenant of Ireland informed Mr. SHEEHAN that he was considering the question of amending the Mental Deficiency Bill with a view to extending its provisions to Ireland, and he would be very glad to be assured that there was a general agreement on the subject.

The Insurance Commission and the Advisory Committee.

Mr. FRED HALL (Dulwich) asked the Secretary to the Treasury whether the National Health Insurance Commissioners consulted, or were required to consult, the Advisory Committee in framing Regulations; if so, whether that committee had been consulted in regard to the Regulations which the Commissioners had issued from time to time; if not, whether he would state what duties were performed by the Advisory Committee; and what was the estimated expenditure for 1913-14 connected with the committee.—Mr. MASTERMAN answered: The Advisory Committee have been consulted freely, and have rendered material assistance to the Insurance Commissioners in connexion with the various sets of Regulations under Part I. of the National Insurance Act. They will continue to be consulted from time to time as occasion arises. Separate provision has not been made in the estimates for expenditure in connexion with this committee. Such expenditure will be defrayed from the general subheads for travelling and subsistence allowances and incidental expenses.

Mr. HALL: Is it not the fact that there have been great complaints in consequence of Regulations having been made by the Insurance Commissioners irrespective of the advice tendered by the Advisory Committee?—Mr. MASTERMAN: I have never heard of any complaints of the kind. I do not think that any Regulations of any importance have been made until after the advice of the Advisory Committee has been received.

Independent Arrangements for Medical Benefit.

Mr. FRED HALL (Dulwich) asked the Secretary to the Treasury whether the decision as to what insured persons were to be allowed to make their own arrangements for medical attendance and treatment was one for the sole discretion of the Insurance Committees; if so, would he explain why he promised to a deputation from the People's League of Medical Freedom that the Government would make every endeavour to secure that permission was granted to those who did not believe in the orthodox system of medicine and desired the services of herbalists and other unqualified persons, and whether he would use his authority to ensure that permission to make their own arrangements was granted to those who had been unable to obtain the doctor of their choice because he refused to go on the panel, a condition with which unqualified persons were not asked to comply.—Mr. MASTERMAN replied: The honourable Member has been misinformed. I distinctly stated at the deputation referred to that for reasons which I have explained on numerous occasions in the House, Insurance Committees could not be deprived of the discretion which is given them by the Act in regard to this matter. I promised, however, that the Government would endeavour to secure that insured persons who had conscientious objections to orthodox systems of medicine, and were willing to make an assertion that they wished for some other form of treatment, should be given the money which otherwise would have been available for their medical benefit.

Mr. HALL: Will the same benefits be given to those insured persons who are desirous of appointing their own doctors who are not on the panel?—Mr. MASTERMAN: Any Insurance Committee can do that to-morrow if they like.

Mr. HALL: Medical men who are not on the panel?—Mr. MASTERMAN: Certainly. Any Insurance Committee that chooses can authorise an insured person to deal with a doctor who is not on the panel.

Mr. HALL: But no Insurance Committee is doing it.

Detection of Bovine Tuberculosis.

Mr. CHARLES BATHURST asked the President of the Board of Agriculture whether he was aware that in certain West of England counties some of the persons appointed as veterinary officers for the purposes of the Tuberculosis Order of 1913 had confessed their ignorance of the microscopic appearance of the bacillus of tuberculosis and their consequent inability in certain cases to identify the disease; and whether, under these circumstances, the Board would, in the interests both of stockowners and the consuming public, issue to the local authorities for the use of their veterinary officers a printed description of the disease containing a pictorial representation of its bacillus.—Mr. RUNCIMAN said in reply: I am informed that a veterinary surgeon in the West of England recently stated that he could not recognise the bacillus of tuberculosis. For the benefit of veterinary surgeons who have duties to perform under the Tuberculosis Order the Royal Veterinary College has arranged a series of 14-day courses of lectures, which I understand are well attended, and I trust that the gentleman referred to will avail himself of this opportunity to improve his knowledge of bovine tuberculosis. There is already abundance of illustrated literature on the subject, and it is unnecessary for the Board to add to it.

Mr. BATHURST: Is the right honourable gentleman aware that, so far as the acting inspectors of the local authorities are concerned, there is a large number of veterinary surgeons who have not a sufficient bacteriological knowledge to recognise the appearance of this bacillus?—Mr. RUNCIMAN: Wherever the officials of the local authorities find their knowledge defective, I understand that they are taking steps to repair that defect by attending the Royal Veterinary College.

MONDAY, JUNE 9TH.

The Fund for Medical Benefit.

Mr. MASTERMAN informed Sir PHILIP MAGNUS that the whole fund for medical benefit was divisible amongst all the doctors on the panel in proportion to the numbers of insured persons on the list of each doctor, the number included in each list being ascertained after the process of allocation of the unaccepted residue had been completed. He understood that the London Insurance Committee had not as yet decided on the method of allocation to be adopted, but it was open to them to make immediate advances to doctors on the panel on account of the payments which would ultimately prove to be due to them. In

making these advances the committee might, but need not necessarily, have regard to the method of allocation to be adopted.

Lists of Panel Practitioners.

Sir PHILIP MAGNUS asked the Secretary to the Treasury whether an Insurance Committee could place any limit on the number of insured persons to be allotted to a medical practitioner; and, if so, by what principle the Committee were guided in so doing.—Mr. MASTERMAN answered: It is the duty of the Insurance Committee in each area to see that the arrangements for medical benefit are such as to secure that the insured persons in their area receive adequate medical attendance and treatment. Subject to this it appears to be undesirable to fix in advance a maximum number of insured persons to be allotted to a doctor, as the number for whom a doctor can properly be responsible must necessarily vary according to the circumstances of each particular case.

Insured Persons on Holiday.

Mr. RONALD MCNEILL asked the Secretary to the Treasury whether the Insurance Commissioners had yet decided how medical benefit was to be provided for insured persons who might be taken ill while absent on holiday or otherwise from the district in which they permanently resided, and while they were beyond the reach of the panel doctor whose accepted patients they were.—Mr. MASTERMAN replied: Yes, sir. I will send the honourable Member a copy of the memorandum issued by the Commissioners in April last.

Medical Service in the Highlands.

Mr. MASTERMAN informed Major HOPE that a special medical grant of £10,000 had been made for the benefit of insured persons in the Highlands and Islands, and was included in the supplementary estimates. The question of making a grant for uninsured persons and of providing for its administration was under consideration.

Domestic Servants and Medical Benefit.

Sir WILLIAM BULL asked the Secretary to the Treasury what became of the money paid under compulsion to the Insurance Commissioners by the large number of domestic servants who refused to go on the panel of any doctor; and was the money divided among the panel doctors.—Mr. MASTERMAN said in reply: I have no reason to suppose that any appreciable number of domestic servants or other insured persons will in case of illness neglect to avail themselves of their right to medical attendance and treatment from the doctors on the panel who are collectively responsible for such attendance and treatment, and who for this reason are entitled under their agreements to have divided among them the whole of the funds available for the medical treatment of insured persons under the arrangements made by the Committee.

Amendment of National Insurance Act.

In reply to Mr. GODFREY LOCKER-LAMPSON, Mr. ASQUITH stated that the Government intended to introduce the Bill to amend the National Insurance Act in a few days. It was the intention of the Government to send it to a committee for consideration.

Gloucestershire Insurance Committee.

Answering Mr. CHARLES BATHURST, Mr. MASTERMAN wrote: The total membership of the Gloucester Insurance Committee is being increased from 50 to 60 in order to give the medical profession a representation of a tenth without altering the composition of the Committee as prescribed by Section 59 of the National Insurance Act. The additional members will be appointed in accordance with the provisions of that section.

TUESDAY, JUNE 10TH.

Sir Victor Horsley and the Home Secretary.

Lord ROBERT CECIL asked the Secretary of State for the Home Department whether he had laid a complaint before the Royal College of Surgeons about Sir Victor Horsley; if so, what was the nature of the complaint; and whether he had refused to give to Sir Victor Horsley any information as to its nature.—Mr. MCKENNA replied: Sir Victor Horsley made certain public statements reflecting very seriously upon the professional conduct and skill of two medical officers in the Prison Service. In justice to these officers I considered it my duty to bring to the notice of the Royal College of Surgeons the statements made by him and the facts of the case as already stated by me in substance in this house. Having laid this full statement before them, I left the matter in their hands. In reply to Sir Victor Horsley's requests for information I have referred him to the Royal College of Surgeons. The communication of the contents of my letter is a matter entirely in their discretion.—In reply to further questions Mr. MCKENNA said that he saw no unfairness in his action, and that he had communicated nothing to the Royal College of Surgeons which had not been stated publicly by either Sir Victor Horsley or himself. His letter was not marked "Private."

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.

Traité de Pathologie Exotique, Clinique et Thérapeutique. Publié en Fascicules sous la Direction de MM. Ch. Grall et A. Clarac. VI. Maladies Parasitaires Peste. Par les Docteurs Lecomte, Gaide, Mathis, Noc, Léger, Angier, Duvigneau, Clarac, Lebœuf, Rigollet, et P.-L. Simond. Price, paper, Fr.12.; boards, Fr. 13.50.

DORNAN, WILLIAM J., Philadelphia.

Transactions of the American Gynecological Society. Volume 37. For the Year 1912. Price not stated.

ENGELMANN, WILHELM, Leipzig.

Ueber kausale und conditionale Weltanschauung und deren Stellung zur Entwicklungsmechanik. Von Wilhelm Roux, Halle, a.S. Price, paper, M.1.50.

GLAISHER, HENRY J., 57, Wigmore-street, Cavendish-square, London, W.

The Treatment of Hæmorrhoids and Rectal Prolapse by Means of Interstitial Injections. By Dudley D'A. Wright, F.R.C.S. Second edition. Price 1s. net.

GRIFFIN, CHARLES, AND COMPANY, LIMITED, London.

A Text-book on Trade Waste Waters: their Nature and Disposal. By H. Maclean Wilson, M.D., B.Sc., Chief Inspector, West Riding of Yorkshire Rivers Board, and H. T. Calvert, M.Sc., Ph.D., F.I.C., Chief Chemical Assistant, West Riding of Yorkshire Rivers Board. Price 15s. net.

HÖLDER, ALFRED, Wien und Leipzig.

Spezielle Pathologie und Therapie. Herausgegeben von weil. Hermann Nothnagel. Fortgeführt von Prof. Dr. L. Von Frankl-Hochwart. Diphtherie und diphtheritischer Croup. Von Dr. Adolf Baginsky, A. O. Professor der Kinderheilkunde an der Universität Berlin, Geheimer Med. Rat. Zweite, neubearbeitete Auflage. Price M.13.

KREIDEL, C. W., Wiesbaden.

Analyse des Harns. Zum Gebrauch für Mediziner, Chemiker und Pharmazeuten, zugleich Elfte Auflage von Neubauer-Huppert's Lehrbuch. Bearbeitet von A. Ellinger, Königsberg, H. Eppinger, Wien, F. Falk, Wien, F. N. Schulz, Jena, K. Spiro, Strassburg, i. E., und W. Wiechowski, Wien. Zweite Hälfte. Price M.27.

LIPPINCOTT (J. B.) COMPANY, London and Philadelphia.

The Catarrhal and Suppurative Diseases of the Accessory Sinuses of the Nose. By Ross Hall Skillern, M.D., Professor of Laryngology, Medico-Chirurgical College; Laryngologist to the Rush Hospital. Price 18s. net.

Text-book of Diseases of the Nose, Throat, and Ear. For the Use of Students and General Practitioners. By Francis R. Packard, M.D., Professor of Diseases of the Nose and Throat in the Philadelphia Polyclinic Hospital and College for Graduates in Medicine. Second edition. Price 15s. net.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.

Man and His Forerunners. By H. v. Buttel-Reepen, Prof. D. Phil. (Zool.). Incorporating Accounts of Recent Discoveries in Suffolk and Sussex. Authorised Translation by A. G. Thacker, A.R.C.S. Lond. Price 2s. 6d. net.

A Dictionary of Applied Chemistry. By Sir Edward Thorpe, C.B., LL.D., F.R.S., Emeritus Professor of Chemistry, Imperial College of Science and Technology, South Kensington, London. Assisted by eminent contributors. Revised and enlarged edition. In five volumes. Vol. IV. Price 45s. net.

Researches on Irritability of Plants. By Jagadis Chunder Bose, M.A., D.Sc., C.S.I., Professor, Presidency College, Calcutta. Price 7s. 6d. net.

Practical Bacteriology, Microbiology, and Serum Therapy (Medical and Veterinary). A Text-book for Laboratory Use. By Dr. A. Besson, formerly Director of Bacteriological Laboratories of the Military Hospitals of France and of the Péan Hospital. Translated and adapted from the Fifth French Edition by H. J. Hutchens, D.S.O., M.A., M.R.C.S., L.R.C.P., D.P.H. Oxford, Heath Professor of Comparative Pathology and Bacteriology of the University of Durham. Price 36s. net.

SCIENCE REVIEWS, LIMITED, 36-38, Whitefriars-street, London, E.C.

Fibroids of the Uterus: their Pathology, Diagnosis, and Treatment. By Sir John Bland-Sutton, Surgeon to the Middlesex Hospital and its Cancer Charity. Price 4s. 6d. net.

SPRINGER, JULIUS, Berlin.

Die biologischen Grundlagen der sekundären Geschlechtscharaktere. Von Dr. Julius Tandler, o.ö. Professor der Anatomie an der Wiener Universität und Dr. Siegfried Grosz, Privatdozent für Dermatologie und Syphilidologie an der Wiener Universität. Price, paper, M.8; bound, M.8.80.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

EDWARDS, K. C., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Sawston District of the county of Cambridge.

FRIEND, GERALD E., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer at Christ's Hospital.

HASLAM, W. F., F.R.C.S. Eng., has been appointed Joint Professor of Surgery in the University of Birmingham.

HILL, W. B., M.D. Manch., has been appointed Tuberculosis Medical Officer to the Greenwich Dispensary.

KAUFFMANN, OTTO J., F.R.C.P. Lond., M.D. Lond., has been appointed Joint Professor of Medicine in the University of Birmingham.

LAVERY, JAMES P., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed one of the Medical Referees under the Workmen's Compensation Act to act for the County of Louth.

LEIGHTON, G. R., M.D. Edin., has been appointed Veterinary Inspector under the Local Government Board for Scotland.

MONRO, T. K., M.D. Glasg., has been appointed Professor of Practice of Medicine in the University of Glasgow.

STEVENS, W. MITCHELL, M.D. Lond., M.R.C.P. Lond., has been appointed Senior Honorary Physician to the King Edward VII.'s Hospital, Cardiff.

TORRENS, JAMES, M.B. Lond., M.R.C.P. Lond., has been appointed Assistant Physician to St. George's Hospital.

TURNER, N. H., L.R.C.P. Lond., M.R.C.S., D.P.H. R.C.P.S. Irel., has been appointed Deputy Medical Officer of Health of Islington and Medical Examiner to the Borough Council.

WINK, C. STEWART, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Halstead (Essex) Union Workhouse and First Division of First District, Public Vaccinator, and Certifying Surgeon under the Factory and Workshop Acts for the Halstead District of the county of Essex.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERYSTWYTH INFIRMARY AND CARDIGANSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £130 per annum, with board and washing.

ALL SAINTS' HOSPITAL FOR GENITO-URINARY DISEASES, Vauxhall Bridge-road, S.W.—Three Assistant Surgeons. Two Anæsthetists, and a Bacteriologist.

BANBURY, HORTON INFIRMARY.—House Surgeon. Salary £100 per annum, with board and residence.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with board and laundry.

BIRKENHEAD UNION INFIRMARY AND WORKHOUSE.—Senior Resident Assistant Medical Officer. Salary £150 per annum, with board, apartments, &c.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Third House Surgeon. Salary £75 per annum, with board, rooms, &c.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant for afternoon attendance for three months. Salary at rate of 52 guineas per annum.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeons, unmarried. Salary £200 per annum, with rooms, fire, light, and attendance.

BIRMINGHAM, QUEEN'S HOSPITAL.—House Physicians and House Surgeons for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

BIRMINGHAM UNION, DUDLEY-ROAD INFIRMARY.—Assistant Medical Officer. Apartments, rations, laundry, and attendance provided.

BOLTON INFIRMARY AND DISPENSARY.—Third House Surgeon. Salary £90 per annum, with apartments, board, and attendance.

BOURNEMOUTH, ROYAL VICTORIA AND WEST HANTS HOSPITAL.—House Surgeon for six months, unmarried. Salary £80 per annum, with board, lodging, and washing.

BRADFORD, BIERLEY HALL HOSPITAL FOR CONSUMPTIVES.—Resident Medical Officer. Salary £120 per annum, with board and residence.

BRIDGWATER HOSPITAL.—House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board, lodging, and washing.

BURY ST. EDMUNDS, WEST SUFFOLK GENERAL HOSPITAL.—Resident Medical Officer, unmarried. Salary £120 per annum, with board, lodging, and laundry.

BURY ST. EDMUNDS UNION.—Medical Officer for Workhouse and Infirmary. Salary £50 per annum. Also Medical Officer for the Parish of St. Mary. Salary £100 per annum.

CALCUTTA, CORPORATION OF.—Health Officer. Monthly salary not less than Rs.1250 and not more than Rs.2000.

CANCER HOSPITAL, Fulham-road, London, S.W.—Senior and Junior House Surgeons for six months. Salaries £80 and £70 per annum respectively.

CANTERBURY BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £160 per annum, with board, lodging, washing, and attendance.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—Senior House Surgeon and Junior House Surgeon, unmarried. Salaries £100 and £90 per annum respectively, with board, lodging, and washing.

CANTERBURY, KENT COUNTY ASYLUM, Chartham.—Junior Assistant Medical Officer, unmarried. Salary £220 per annum, with apartments, attendance, laundry, &c.

CARDIFF, KING EDWARD VII.'S HOSPITAL.—House Surgeon for six months. Salary £30, with board, residence, and laundry.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant for three months.

CHELTENHAM GENERAL HOSPITAL.—House Physician, unmarried. Salary £100 per annum, with board, lodging, and washing.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Senior House Surgeon. Salary £120 per annum, with board, apartments, and laundry.

CHESTER GENERAL INFIRMARY.—House Physician. Salary £90 per annum, with residence and maintenance.

COVENTRY AND WARWICKSHIRE HOSPITAL, Coventry.—House Physician and Junior House Surgeon. Salary £90 per annum each, with residence, board, and laundry.

CUMBERLAND COUNTY COUNCIL.—Tuberculosis Officer. Salary £350 per annum.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant House Surgeon, unmarried. Salary at rate of £75 per annum, with board and laundry.

DORCHESTER, DORSET COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

DUBLIN, ROYAL VICTORIA EYE AND EAR HOSPITAL, Adelaide-road.—House Surgeon. Salary £40 per annum.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY.—Assistant House Surgeon. Salary £65 per annum, with board and washing.

DURHAM COUNTY COUNCIL.—Tuberculosis Medical Officer. Salary £500 per annum. Also School Medical Inspector. Salary £300 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, London, S.E.—House Surgeon for five months. Salary at rate of £75 per annum with board, residence, and washing. Also House Physician for six months. Salary at rate of £75 per annum, with board, residence, and washing. Also Clinical Assistants in the Out-patient Departments.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—Assistant House Surgeon for six months. Salary at rate of 100 guineas per annum, with board, apartments, and washing.

FOLKESTONE, ROYAL VICTORIA HOSPITAL.—Resident House Surgeon. Salary £100 per annum, with apartments, board, and laundry.

GATESHEAD DISPENSARY.—Assistant Medical Officer. Salary £200 per annum.

GRIMSBY AND DISTRICT HOSPITAL.—Senior House Surgeon and Junior House Surgeon. Salary £100 and £80 per annum respectively, with board, lodging, attendance, and washing.

HITCHIN, THREE COUNTIES ASYLUM.—Junior Assistant Medical Officer. Salary £170 per annum, with board, apartments, washing, and attendance.

HITHER GREEN, S.E., PARK HOSPITAL FOR CHILDREN.—Senio Assistant Medical Officer. Salary £250 per annum, with board, lodging, and washing. Also Locum Tenens Assistant Medical Officer. Salary £4 4s. per week, with board, lodging, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Physician and House Surgeons, unmarried, for six months. Salary £30, with washing allowance, board, and residence.

HOSPITAL FOR WOMEN, Soho-square, W.—Pathologist and Registrar. Salary £100 per annum.

INDIAN MEDICAL SERVICE.—Twelve Commissions.

IPSWICH, EAST SUFFOLK AND IPSWICH HOSPITAL.—House Physician and Second House Surgeon. Salary £80 per annum each, with board, residence, and laundry.

LANCASTER, COUNTY ASYLUM.—Assistant Medical Officer. Salary £200 per annum, with board, apartments, washing, and attendance.

LANCASHIRE EDUCATION COMMITTEE.—School Medical Inspector. Salary £250 per annum.

LEEDS GENERAL INFIRMARY.—Ophthalmic House Surgeon. Salary £50 per annum, with board, residence, and laundry.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £100 per annum, with board and residence.

LEICESTER, LEICESTERSHIRE AND RUTLAND ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, residence, and laundry.

LICHFIELD, COUNTY MENTAL HOSPITAL, Burntwood.—Junior Assistant Medical Officer, unmarried. Salary £210 per annum, with apartments, board, and washing.

LINCOLN COUNTY HOSPITAL.—Junior House Surgeon, unmarried, for six months. Salary at rate of £100 per annum, with board, residence, and washing.

LINCOLN MENTAL HOSPITAL, The Lawn, Lincoln.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, &c.

LIVERPOOL EYE AND EAR INFIRMARY.—Honorary Assistant Surgeon.

LIVERPOOL STANLEY HOSPITAL.—Two House Physicians. Salary £75 per annum each, with board, residence, and laundry.

LIVERPOOL UNIVERSITY FACULTY OF MEDICINE.—Walter Myers Chair of Parasitology. Salary £800 per annum.

LONDON LOCK HOSPITAL.—FEMALE HOSPITAL: House Surgeon and Assistant House Surgeon. Salary £100 and £80 per annum respectively, with board, lodging, and washing.

LOWESTOFT HOSPITAL.—House Surgeon, unmarried. Salary at rate of £100 per annum, with board, residence, and laundry.

MANCHESTER, BAGULEY SANATORIUM FOR TREATMENT OF TUBERCULOSIS.—Assistant Medical Officer, unmarried. Salary £200 per annum, with board and residence.

MERSTHAM, SURREY COUNTY ASYLUM, Netherne.—Locum Tenens Medical Officer, unmarried, for three months. Salary £4 4s. per week, with apartments, board, lodging, and washing.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—House Physician for six months. Salary at rate of £100 per annum, with board, attendance, and laundry.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead.—House Physician. Salary £75 per annum, with board, residence, and washing.

NESTING AND LUNNASTING PARISH COUNCIL.—Medical Officer. Salary £50 per annum.

NEWCASTLE-UPON-TYNE DISPENSARY.—Visiting Medical Assistants. Salary £200 per annum.

NEW HOSPITAL FOR WOMEN, Euston-road.—Resident Medical Officer (female) for House of Recovery (Barnet). Also Clinical Assistant and Anæsthetist.

NORTHAMPTON, COUNTY BOROUGH OF.—Assistant Medical Officer of Health. Salary £300 per annum.

OLDHAM COUNTY BOROUGH.—Assistant Schools Medical Officer. Salary £260 per annum.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Honorary Radiographer.

PORTSMOUTH, ROYAL PORTSMOUTH HOSPITAL.—House Physician for six months. Salary £75 per annum, with board, &c.

PRESTON, COUNTY ASYLUM, Whittingham.—Assistant Medical Officer, unmarried. Salary £200 per annum, with board, apartments, and washing.

PUBLIC DISPENSARY, 122, Drury-lane, W.C.—Resident Medical Officer, unmarried. Salary £105 per annum, with apartments, attendance, coals, and electric light.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Resident Medical Officer for four months. Salary at rate of £60 per annum, with board, residence, and washing.

REDHILL, EARLSWOOD ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, residence, washing, &c.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon. Salary £100 per annum, with board, lodging, and washing.

ROYAL DENTAL HOSPITAL OF LONDON, Leicester-square.—Joint Afternoon Anæsthetist. Salary £24 per annum.

ROYAL EAR HOSPITAL, 42 and 43, Dean-street, London, W.—Clinical Assistants.

ROYAL EYE HOSPITAL, Southwark, S.E.—Junior House Surgeon for six months. Salary at rate of £50 per annum, with board and residence. Also Clinical Assistants.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Female Assistant Anæsthetist. Salary £50 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—Resident Medical Officer for six months. Salary at rate of £120 per annum, with board, lodging, and washing.

ROYAL NAVAL MEDICAL SERVICE.—Twenty-five appointments.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Senior Resident Medical Officer. Salary at rate of £70 per annum, with board and washing.

ST. HELENS, COUNTY BOROUGH OF.—Medical Officer of Health. Salary £550 per annum.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square, W.—Resident Medical Officer. Salary £150 per annum, with apartments, attendance, &c.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Assistant Resident Medical Officer, unmarried, for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

ST. MARY'S HOSPITAL, London, W.—Resident Assistant Anæsthetist for six months. Salary at rate of £100 per annum, with board and residence.

SALISBURY INFIRMARY.—Assistant House Surgeon, unmarried. Salary £50 per annum, with apartments, board, and lodging.

SHEFFIELD CHILDREN'S HOSPITAL.—House Surgeon. Salary £85 per annum, with board and residence.

SHEFFIELD, JESSOP HOSPITAL FOR WOMEN.—Assistant House Surgeon, unmarried. Salary £80 per annum, with board, residence, and laundry.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £80 per annum, with board, lodging, and washing.

SOUTHAMPTON, FREE EYE HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £80 per annum, with rooms, board, and washing.

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £90 per annum, with residence, board, and washing.

STOKE-ON-TRENT INFECTIOUS DISEASES HOSPITAL, Bucknall.—Resident Assistant Medical Officer (female). Salary £150 per annum, with apartments, board, washing, and attendance.

SWANSEA GENERAL AND EYE HOSPITAL.—House Surgeon. Salary £75 per annum, with board, washing, and attendance.

TAUNTON AND SOMERSET HOSPITAL.—Resident Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, lodging, and laundry.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea.—Pathologist. Salary £105 per annum, with lunch.

WALLASEY, COUNTY BOROUGH OF.—Tuberculosis Medical Officer. Salary at rate of £350 per annum.

WARWICK ASYLUM.—Assistant Medical Officer, unmarried. Salary £175 per annum, with board, residence, and laundry.

WEST AFRICAN MEDICAL STAFF.—Appointments. Salary £400 per annum.

WEST BROMWICH AND DISTRICT HOSPITAL.—Assistant Resident House Surgeon and Anæsthetist, unmarried. Salary £75 per annum, with board, residence, and washing.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford, E.—Senior House Physician and Junior House Physician. Salary of former £100 per annum and of latter £75 per annum, with board residence.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £120 per annum, with board and residence.

WEST RIDING OF YORKSHIRE.—Tuberculosis Officer. Salary £400 per annum.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician. Salary £80 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, rooms, and laundry.

WORCESTER GENERAL INFIRMARY.—House Physician. Salary £100 per annum, with board, residence, and washing.

YORK, NORTH RIDING ASYLUM, Clifton.—Second Assistant Medical Officer. Salary £150 per annum, with board, apartments, washing, and attendance.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Penmachno, in the county of Carnarvon; at Aughrim, in the county of Wicklow; at Broughton-in-Furness, in the county of Lancaster; and at Lydbrook, in the county of Gloucester.

Births, Marriages, and Deaths.

BIRTHS.

HOTCHKIS.—On June 6th, at Mid-Dykebar, Paisley, the wife of R. D. Hotchkis, M.D., of a daughter.

STOTT.—On May 23rd, at Ootacamund, India, the wife of Captain Hugh Stott, M.B., B.S., Indian Medical Service, Surgeon to His Excellency the Governor of Madras, of a son.

TODD.—On June 6th, to Dr. and Mrs. A. B. Slingsby Todd, of The Rowans, Twickenham Green, a daughter.

MARRIAGES.

MORRISON—MACKENZIE.—On June 7th, at the Royal Marine Hotel, Nairn, by the Rev. R. Wilson, M.A., William Morrison, M.B., Ch.B., W.A.M.S., Northern Nigeria, son of the late Rev. W. Morrison, M.A., Boharm, Banffshire, to Jeanie (Queenie), elder daughter of D. G. Mackenzie, Albert House, Nairn. No cards.

WILSON—WALTON.—On June 6th, at Edgbaston Parish Church, by the Rev. G. H. Cameron, B.A., William Wilson, M.B., C.M. Edin., of Forest Hill, to Jane Alice (Jennie), only daughter of Frederick Walton, Edgbaston.

DEATHS.

BASS.—On June 9th, at 11, Haarlem-road, Brook Green, W., Charles William Bass, M.R.C.S.E., aged 68. No flowers.

CLARK.—On June 7th, suddenly, Oscar William Clark, M.B. Oxon., M.R.C.S., of St. Luke's House, Gloucester, aged 58 years.

ROUGHTON.—On June 10th, at 48, Lauderdale Mansions (late of 38, Queen Anne-street), Edmund Wilkinson Roughton, M.D. Lond., F.R.C.S., aged 51 years, Surgeon to the Royal Free Hospital, son of the late Robert Roughton, R.N. Service at the Chapel of the Royal Free Hospital at 12 o'clock, and interment at the Marylebone Cemetery at 1 o'clock, on Saturday, June 14th. Friends please accept this (the only) intimation.

SMITH.—On June 3rd, at Cerrito, Parkstone, Dorset, the Rev. Dr. Francis Smith, M.A., M.D., aged 90 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE POSITION OF THE LOCUM-TENENT.

To the Editor of THE LANCET.

SIR,—The time of year when the locum-tenent is most required is at hand, and I have thought that a candid record of a few experiences of mine last summer might prove not uninteresting.

One of my first engagements was in the south-east of London, a ready-cash practice in a cheap district. The surgery looked as if it had not been cleaned out for years; tables and chairs were littered with papers and samples from druggists, with their "literature." The housekeeper informed me she was not allowed to "disarrange anything." I lost no time in causing a disarrangement of the accumulated dust on bottles and shelves, but the task was certainly not what I was being paid for. The first evening I had for supper some sole, procured at a near-by fried fish shop; subsequently I had all my meals at a restaurant nearly two miles away, not, of course, at my expense, but at much inconvenience to me. My next engagement was in a working-class north London suburb. The principal told me he had no maternity engagements for the month of August, when he proposed taking a holiday; not that I made inquiry or had any objection—the information was volunteered. I attended four maternity cases during the time, and three of those patients told me that they had engaged my principal previously for attendance during August. On his return the principal expressed agreeable surprise. Later I declined several engagements where I was expected to do the visiting on a bicycle. Some general practitioners who are the proud possessors of motor cars lock these up before going away on a vacation, leaving "a bone-shaker" for the "locum's" use. I hold that if a man is considered good enough to take charge of a practice he is good enough to use a motor car; the practitioner should be as ready to take a chance with his motor car as with his patients. Many of those men in practice to-day have done locum work in the past, which makes the suspicion and want of confidence the harder. In the main the locum-tenent is worthy of trust, and it is better to run the risk of disappointment than to treat a good man badly.

I am, Sir, yours faithfully,

June 5th, 1913. DEPUTY.

A CATALOGUE OF SURGICAL INSTRUMENTS.

WE have received from Messrs. Mayer and Meltzer, 71, Great Portland-street, London, a new catalogue of surgical instruments and aseptic hospital furniture which, in the guise of a picture book, represents very well both the enormous practical progress which surgery has been making of late and the extent to which nowadays the use of chemistry and allied sciences is depended upon by the modern operator. A supplementary catalogue deals especially with the instruments used in the practice of laryngology, rhinology, and otology. We observe that a large number of the instruments catalogued have already been described by their inventors in our columns; for example, the portable surgical electromotor which was constructed for Mr. C. A. Ballance and Dr. William Milligan. This apparatus, which has a 16 volt accumulator and a capacity of 18 ampère hours, weighs in all about 34 pounds. It is in two parts only, and can be carried about for private operations, while it is, we learn, in use at some of the best known London and provincial hospitals. The Buchanan portable operating table is another appliance made by Messrs. Mayer and Meltzer which gives an opportunity to the surgeon and gynæcologist for performing in the homes of their patients serious operations with the same facility that they can be performed in general hospitals. The firm publishes also from time to time a descriptive supplementary catalogue of recent surgical instruments and appliances of interest to physicians and surgeons, and these catalogues, as well as those having reference to general surgery and laryngology, are sent to practitioners on request.

NEW MODELS OF MICROSCOPES.

THE Bausch and Lomb Optical Company, of 19, Thavies-inn, Holborn Circus, London, E.C., who are affiliated with the well-known Carl Zeiss Optical Works at Jena, have forwarded us their latest catalogue of microscopes, drawing our attention to the models F. and F.F., which seem to comply well with modern bacteriological requirements. The new model F. is moderate in cost, and is provided with a fully inclinable joint giving motion in a direction from the vertical to the horizontal. It has a firm base and strong arm, which adapts it for arduous laboratory work. The focussing adjustment is by a standard rack and pinion provided with a stop to prevent the pinion from overriding the rack. The fine adjustment is of original lever type with two size knurled head for slow and rapid movement which ceases to operate when the objective touches the slide. Model F.F. is similar, but is provided with a substage, which consists of a mounting for the

Abbé condenser and an iris diaphragm which comes into the plane of the stage when the screw is turned up as far as possible, allowing the condenser to be used in immersion contact with the slide if desired. The diaphragm is automatically locked against closing when the condenser is in position. The condenser is furnished with an iris diaphragm mounting to fit the substage, so that the equipment includes two iris diaphragms.

Enquirer has not entrusted us with his name and address. If he will send them we shall be pleased to answer his question.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London, W.

THURSDAY.—Prof. Sir James Dewar: Atomic Specific Heats between the Boiling Points of Liquid Nitrogen and Hydrogen. I., The Mean Atomic Specific Heats at 50° Absolute of the Elements a Periodic Function of the Atomic Weights.—Hon. R. J. Strutt: An Active Modification of Nitrogen produced by the Electric Discharge. V.—Dr. J. A. Harker and Dr. G. W. C. Kaye: On the Electrical Emissivity and Disintegration of Hot Metals.—Dr. A. O. Rankine: On a Method of Measuring the Viscosity of the Vapours of Volatile Liquids, with an Application to Bromine (communicated by Prof. A. W. Porter).—Mr. E. E. Fournier d'Albe: On the Efficiency of Selenium as a Detector of Light (communicated by Prof. J. H. Poynting).—Mr. A. Hopwood and Mr. C. Weizmann: Synthesis of the Anhydrides of α Aminoacyl Glucosamines (communicated by Dr. A. Harden).—Mr. H. S. Jones: The Flexure of Telescope Mirror-discs arising from their Weight and its Influence upon Resolving Power (communicated by Sir J. Larmor).—Prof. W. H. Young: (1) On a Condition that a Trigonometrical Series should have a Certain Form; (2) On Trigonometrical Series whose Cesaro Partial Summations Oscillate Finitely.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

THURSDAY.

SECTION OF DERMATOLOGY (Hon. Secretaries—Wilfrid Fox, J. M. H. MacLeod): at 5 P.M.

Annual General Meeting.—Election of Officers and Council for Session 1913-1914.

Cases:

Dr. Galloway: A short paper on a Case of Erythema Induratum (with lantern illustration).

Dr. Sibley: (1) A Case of Multiple Verrucæ and Unusual Result of CO_2 Snow; (2) A Case of Pityriasis Rubra.

And other Cases.

SATURDAY.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN (Hon. Secretaries—H. S. Clogg, F. Langmead, P. N. Blake-Odgers): at 2.30 P.M.

Provincial Meeting at the General Hospital, Northampton.

Cases:

Congenital Absence of Radii; Congenital Absence of Tibiæ and Other Deformities; Polyarthritis of Small Joints in Congenital Syphilis; Syphilitic Occlusion of Anterior Nares; Lymphangioma of Tongue; Three Cases of Congenital Family Jaundice; Hypopituitarism; Sarcoma of Thigh Muscles; Persistent Hyaloid Artery; Peculiar Case of Myosis; and other Cases.

Papers:

Dr. Hichens: Cases of Sudden Heart Failure in Children who have been Treated for Extensive Eczema.

Dr. Robson: Nocturnal Enuresis.

LONDON DERMATOLOGICAL SOCIETY, St. John's Hospital, 49, Leicester-square, W.C.

TUESDAY.—4.15 P.M., Annual Meeting. Election of Officers for the ensuing year. 4.30 P.M., Cases will be shown by Dr. Bunch, Dr. C. H. Mills, Mr. A. T. Bremner, Dr. S. Gooding, and Dr. Reeve. 5.15 P.M., Paper:—Dr. E. J. Reeve: The Treatment of Diseases of the Skin by Intensive Iodine Administration.

ROYAL METEOROLOGICAL SOCIETY, 70, Victoria-street, Westminster, S.W.

WEDNESDAY.—4.30 P.M., Paper:—Mr. J. Peck and Dr. H. C. Snow: The Correlation of Rainfall.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos-street, Cavendish-square, W.

FRIDAY.—8.30 P.M., Annual General Meeting. Short Paper:—Dr. R. T. Leiper: Some Remarks on Recently Described Helminths of Man.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. W. Fox: Clinique (Skin). 5.15 P.M., Lecture:—Mr. P. M. Yearsley: The Causes which Lead to Acquired Deafness in Children and their Prevention.

TUESDAY.—4 P.M., Dr. W. H. Willcox: Clinique (Medical). 5.15 P.M., Lecture:—Mr. P. J. Freyer: Cancer of the Prostate, its Nature, Symptoms, and Treatment.

WEDNESDAY.—4 P.M., Mr. I. Back: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. J. Sherren: Chronic Appendicitis.

THURSDAY.—4 P.M., Dr. C. O. Hawthorne: Clinique (Medical). 5.15 P.M., Dr. J. F. H. Daly: Maximal and Minimal Blood Pressures and their Significance (illustrated by Pachon's Sphygmo-oscillometer).

FRIDAY.—4 P.M., Mr. K. Campbell: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Souttar: Injuries to Nerves in General Practice.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Mr. T. Gray: Demonstration of Fractures, &c. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Diseases of the Skin. 5 P.M., Lecture:—Mr. Souttar: Injuries to Nerves in General Practice.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 11 A.M., Mr. Souttar: Demonstration of Minor Operations. 12 noon, Lecture:—Mr. Souttar: Abdominal Diagnosis. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Robinson: Female Disorders which Demand Special Attention from the General Practitioner.

THURSDAY.—10.30 A.M., Dr. Simson: Gynæcological Demonstration. 12.15 P.M., Lecture:—Dr. G. Stewart: Neurological Cases. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Robinson: Female Disorders which Demand Special Attention from the General Practitioner.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Lecture:—Dr. Owen: Practical Medicine. 12.15 P.M., Lecture:—Dr. Bernstein: Clinical Pathology. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Diseases of the Skin. 5 P.M., Lecture:—Dr. Robinson: Female Disorders which Demand Special Attention from the General Practitioner.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Lecture:—Mr. Souttar: Surgical Anatomy of the Abdomen. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—Out-patient Demonstrations:—10 A.M. Dr. Singer: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Bigg: Throat, Nose, and Ear.—2.15 P.M., Mr. W. Turner: Surgery. 3 P.M., Mr. W. Turner: Operations. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.15 P.M., Mr. R. Lake: Ear and Throat.

TUESDAY.—Out-patient Demonstrations:—10 A.M., Dr. G. Holmes: Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Mr. R. Carling: Surgery. 3.15 P.M., Dr. G. Rankin: Medicine. 4.30 P.M., Special Lecture:—Dr. T. Lister: Tuberculin Treatment in Ambulant Cases.

WEDNESDAY.—Out-patient Demonstrations: 10 A.M., Dr. F. Langmead: Medical. Surgical. 11 A.M., Mr. R. E. Bickerton: Eye.—2 P.M., Mr. L. V. Cargill or Mr. Choyce: Operations. Dr. A. Davies: Pathological Demonstration. 2.15 P.M., Dr. F. Taylor: Medicine. 3.15 P.M., Mr. Cargill: Eye Clinique. 4.30 P.M., Mr. C. C. Choyce: Surgery.

THURSDAY.—Out-patient Demonstrations:—10 A.M., Dr. Singer: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Bigg: Throat, Nose, and Ear.—2 P.M., Mr. R. Carling or Mr. W. Turner: Operations. 3.15 P.M., Dr. R. Wells: Medicine. 4.30 P.M., Special Lecture:—Mr. I. Back: Tumours of Breast.

FRIDAY.—Out-patient Demonstrations;—10 A.M., Dr. G. Holmes: Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Sir John Rose Bradford: Medicine 3.15 P.M., Mr. L. McGavin: Surgery. 3.15 P.M., Special Lecture:—Mr. L. McGavin: Some Injuries of the Knee-joint.

SATURDAY.—Out-patient Demonstrations: 10 A.M., Dr. F. Langmead: Medical. Surgical. 11 A.M., Mr. R. E. Bickerton: Eye.—10 A.M., Radiography.

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NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY AND FRIDAY.—3.30 P.M., Clinical Lectures:—Mr. L. Paton: Optic Neuritis.

QUEEN'S HOSPITAL FOR CHILDREN, Board Room of the Hospital, Hackney-road, N.E.

FRIDAY.—4 P.M., Dr. S. Owen: Disorders of the Nervous System in Infancy and Childhood.

THE THROAT HOSPITAL, Golden-square, W.

MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.

THURSDAY.—5.15 P.M., Clinical Lecture.

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THURSDAY.—4.15 P.M., Dr. A. Renshaw: Vaccines. (Post-Graduate Clinic.)

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THURSDAY.—10 A.M., Major Operations.
FRIDAY.—10 A.M., Gynæcological Lecture: Uterine Displacements. 11 A.M., Examination of Patients and Minor Operations. 4 P.M., Class in Gynæcological Diagnosis.

For further particulars of the above Lectures, &c., see Advertisement Pages.

A DIARY OF CONGRESSES.

We shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced:—

April 26th–Nov. 5th (Ghent).—International Exhibition.
May 31st to October (London, Earl's Court).—Imperial Services Exhibition.
May–October (Leipzig).—First International Building Exhibition.
June 11th (opened) (London, Crystal Palace).—Anglo-German Exhibition.
,, 16th and 17th (Minneapolis).—Fifteenth Annual Meeting of the American Proctologic Society.
,, 17th–20th (Minneapolis).—American Medical Association.
,, 24th (opens) (London).—Historical Medical Museum. (Organised by Mr. Henry S. Wellcome.)
,, 24th–27th (London, Ontario).—Canadian Medical Association.
,, 26th–28th (Oxford).—Fourth Annual Conference of the British Hospitals Association.
,, 27th (London, Inns of Court Hotel).—Conference of the Pure Food and Health Society of Great Britain.
,, 30th and July 1st (London, Guildhall).—Conference on Diet, Cookery, and Hygiene in Elementary Schools and Institutions.
July 7th–12th (Exeter).—Twenty-eighth Congress of the Royal Sanitary Institute.
,, 16th–18th (Oxford, Keble College).—Oxford Ophthalmological Congress.
,, 18th–25th (London).—Imperial Motor Transport Conference.
,, 21st–24th (London).—British Pharmaceutical Conference.
,, 22nd–25th (Brighton).—Eighty-first Annual Meeting of the British Medical Association.
Aug. 1st–3rd (Ghent).—Congress against the Adulteration and Deterioration of Foodstuffs.
,, 1st–5th (Brussels).—Third International Conference on Cancer.
,, 3rd–8th (London).—Sixth International Dental Congress.
,, 4th and 5th (London, Caxton Hall).—English-speaking Conference on Infant Mortality.
,, 6th–12th.—(London).—Seventeenth International Congress of Medicine.
,, 20th–26th (Ghent).—Third International Congress of Neurology and Psychiatry.
,, 25th–30th (Buffalo).—Fourth International Congress of School Hygiene.
,, 31st–Sept. 7th (Antwerp).—Fourth International Congress for the Hygiene and Salubrity of Dwellings.
Sept. 2nd–6th (Groningen).—International Physiological Congress.
,, 9th–13th (Vienna).—Second International Congress of Life Saving and Prevention of Accidents.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 11th, 1913.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
June 5	29·83	S.W.	...	115	68	60	59	65	Cloudy
,, 6	29·82	S.W.	0·06	110	64	53	53	54	Overcast
,, 7	29·89	S.W.	0·09	105	69	51	54	55	Raining
,, 8	29·95	W.	...	120	64	51	50	54	Cloudy
,, 9	30·18	S.W.	0·09	119	67	48	50	55	Cloudy
,, 10	29·81	WSW	...	113	69	54	53	56	Raining
,, 11	30·07	W.	...	109	65	51	52	58	Fine

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